

# HYMAX<sup>®</sup>

a **MUELLER** brand

## APPLICATION SELECTION GUIDE

### HYMAX Pipe Repair Solutions



JOIN



REPAIR



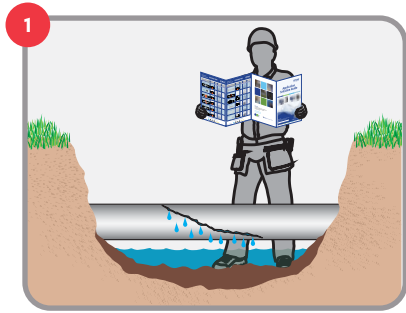
RESTRAIN



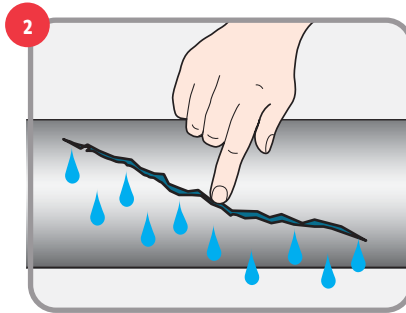
TAP

**MUELLER**

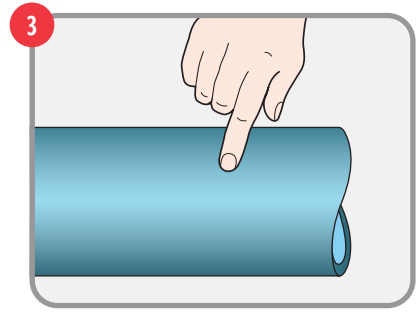
# USING THE MUELLER AND HYMAX APPLICATION SELECTION GUIDE



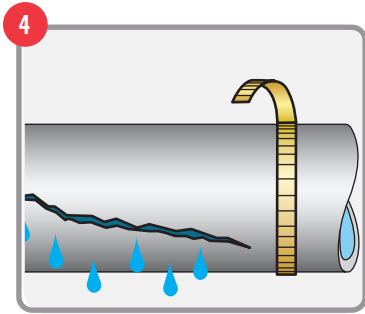
1  
Open Application Selection Guide



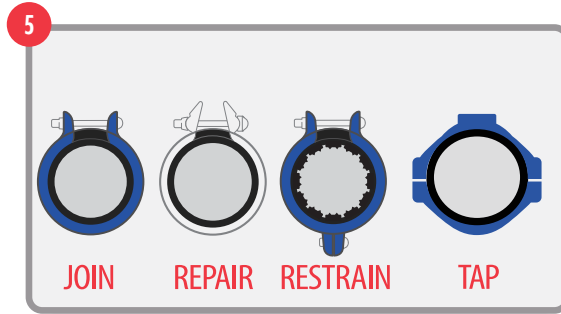
2  
Determine Damage Type



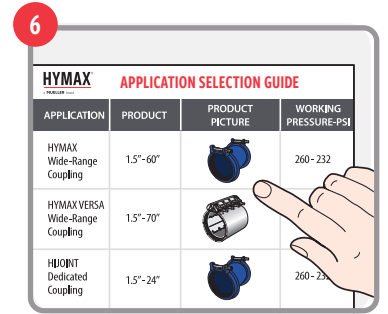
3  
Identify Pipe Material



4  
Measure Pipe



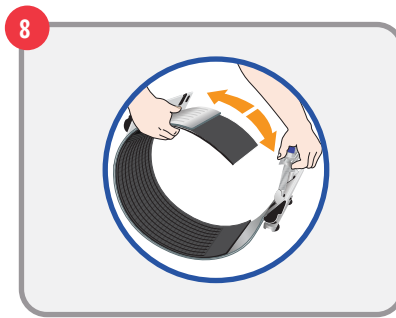
5  
Identify Application Type



6  
Choose Product



7  
Check Label Data

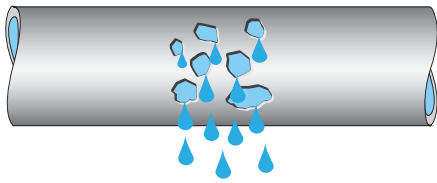


8  
Begin Installation

NOTE: For working pressure and other data - go to page #9-10  
For more technical data - refer to the product label.

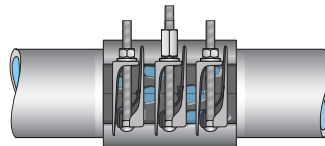
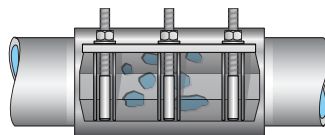
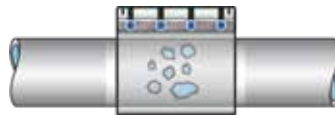
**FIELD SITUATION**

**Hole/ Holes**



For Net Sealing Area of product, refer to product specification sheet

**SOLUTION /APPLICATION**



**PIPE SIZE**

1.5" - 85"

1.5" - 24"

2" - 12"

2" - 12"

**PRODUCT\***

**HYMAX VERSA**  
Wide-Range Coupling



**HYMAX CLAMP**  
Wide-Range Clamp



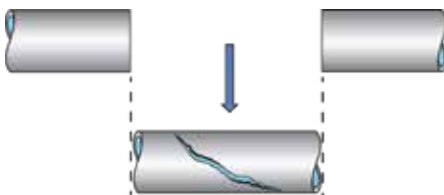
**HYMAX 540 SERIES**  
Single Section Full-Seal  
All Stainless Steel Clamp



**HYMAX 500 SERIES**  
Single Section Full-Seal Clamp



**Repairs That Require  
Pipe Replacement**



Cut out section



1.5" - 60"

1.5" - 85"

1.5" - 16"

**HYMAX**  
Wide-Range Coupling



**HYMAX VERSA**  
Wide-Range Coupling



**HYMAX GRIP**  
Wide-Range Restraint Coupling



\* For other options please consult the full line catalog.

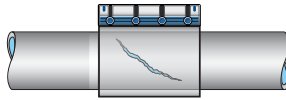
**FIELD SITUATION**

**SOLUTION/APPLICATION**

**PIPE SIZE**

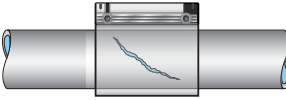
**PRODUCT\***

**Longitudinal Crack  
Short Crack Repair**  
(Cracks in pipe)



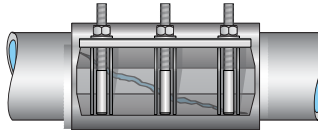
1.5" - 85"

**HYMAX VERSA**  
Wide-Range Coupling



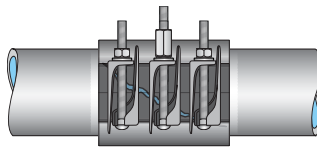
1.5" - 24"

**HYMAX CLAMP**  
Wide-Range Clamp



2" - 12"

**HYMAX 540 SERIES**  
Single Section Full-Seal  
All Stainless Steel Clamp

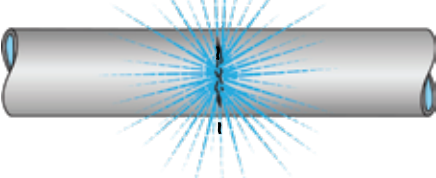


2" - 12"

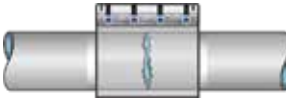
**HYMAX 500 SERIES**  
Single Section Full-Seal Clamp



**Shear Break \***

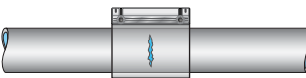


\* If the pipes are offset,  
HYMAX Versa is recommended



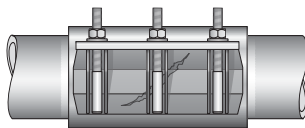
1.5" - 85"

**HYMAX VERSA**  
Wide-Range Coupling



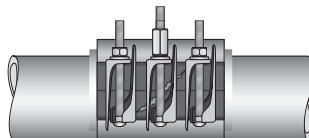
1.5" - 24"

**HYMAX CLAMP**  
Wide-Range Clamp



2" - 12"

**HYMAX 540 SERIES**  
Single Section Full-Seal  
All Stainless Steel Clamp



2" - 12"

**HYMAX 500 SERIES**  
Single Section Full-Seal Clamp



\* For other options please consult the full line catalog.



**FIELD SITUATION**

**SOLUTION/APPLICATION**

**PIPE SIZE**

**PRODUCT**

**Repair Sleeve Joint**

Crack

Leak



1.5" - 85"

**HYMAX VERSA**  
Wide-Range Coupling



**Repair Bell Joint**

Crack

Leak



1.5" - 60"

**HYMAX\***  
Wide-Range Coupling



**HYMAX GRIP\***  
Wide-Range Restraint Coupling



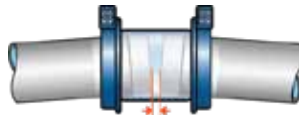
1.5" - 16"

\* Can also be repaired by pipe section replacement

**Connecting or restraining pipe with angular deflection**



Deflection up to 4° per side

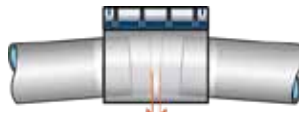


1.5" - 60"

**HYMAX**  
Wide-Range Coupling



Deflection up to 3° per side



1.5" - 85"

**HYMAX VERSA**  
Wide-Range Coupling



Deflection up to 4° per side



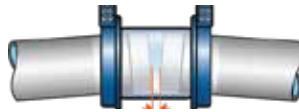
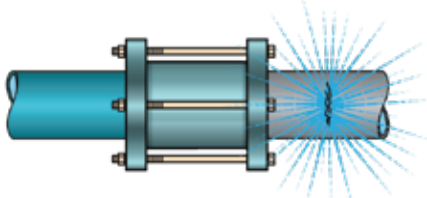
1.5" - 16"

**HYMAX GRIP**  
Wide-Range Restraint Coupling



**Break/Crack adjacent to a rigid connection**

Dynamic Deflection up to 4° per side



1.5" - 60"

**HYMAX**  
Wide-Range Coupling



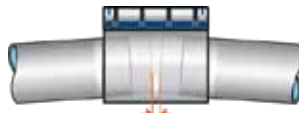
Caused by:



Ground movement after installation



Dynamic Deflection up to 3° per side



1.5" - 85"

**HYMAX VERSA**  
Wide-Range Coupling



Dynamic Deflection up to 4° per side



1.5" - 16"

**HYMAX GRIP**  
Wide-Range Restraint Coupling



**PREVENTION**

Installation recommended with a product enabling Dynamic Deflection (absorbing ground movement after installation)

\* For other options please consult the full line catalog.

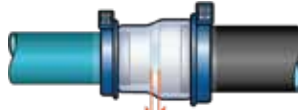
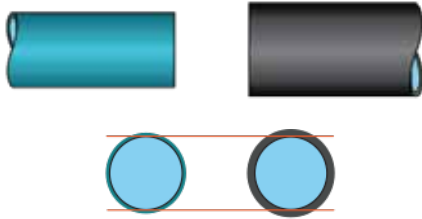
**FIELD SITUATION**

**SOLUTION/APPLICATION**

**PIPE SIZE**

**PRODUCT**

Connecting or restraining pipe with different diameters and materials



1.5" - 60"

**HYMAX**  
Reducer Wide-Range Coupling



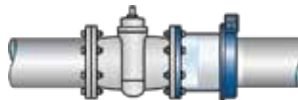
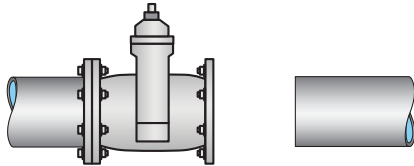
**HYMAX GRIP**  
Reducer Wide-Range  
Restraint Coupling



1.5" - 12"



Connecting or restraining plain end pipe to a flanged connection

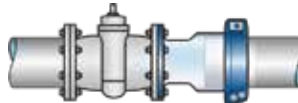


1.5" - 60"

**HYMAX**  
Flange Adaptor



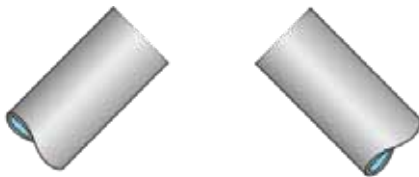
**HYMAX GRIP**  
Restraint Flange Adaptor



1.5" - 12"



Restraining pipe at 45° or 90° angles



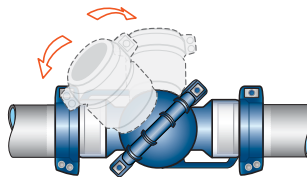
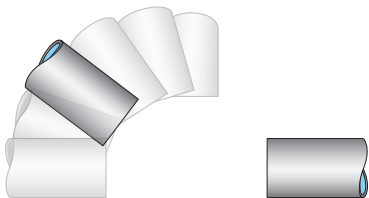
No thrust blocks needed

4" - 12"

**HYMAX GRIP ELBOW**  
Wide-Range Restraint Coupling



Restraining pipe at any angle from 0°- 90°



4" - 12"

**HYMAX GRIP**  
Restrained SwivelJoint Coupling



\* For other options please consult the full line catalog.

**FIELD SITUATION**

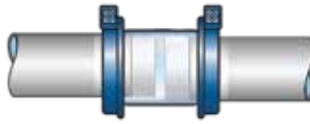
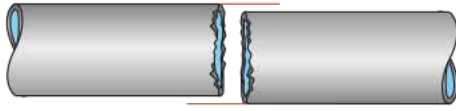
**SOLUTION/APPLICATION**

**PIPE SIZE**

**PRODUCT**

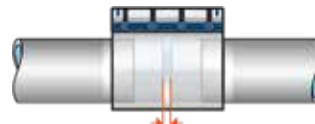
**Connecting or restraining misaligned pipes**

**NOTE:** Maximum offset - according to product label.



1.5" - 60"

**HYMAX**  
Wide-Range Coupling



1.5" - 85"

**HYMAX**  
Wide-Range Coupling

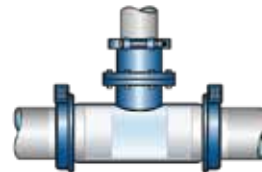
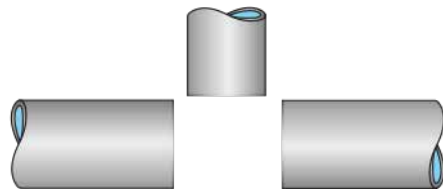


1.5" - 16"

**HYMAX GRIP**  
Wide-Range Restraint Coupling



**Connecting two pipes to a threaded or flanged connection**



1.5" - 60"

**HYMAX Flanged Outlet**  
or **HYMAX Threaded Outlet**



**Capping a pipe**



1.5" - 12"

**HYMAX GRIP**  
Restrained End Cap



**Removal and replacement of flanged connections**



Closed position



Open position



2" - 24"

**HYMAX**  
Dismantling Joint



\* For other options please consult the full line catalog.

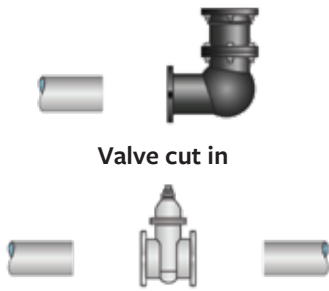
**FIELD SITUATION**

**SOLUTION/APPLICATION**

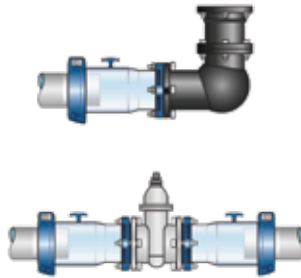
**PIPE SIZE**

**PRODUCT**

Restraining plain end pipe to Mechanical Joint connection



Valve cut in



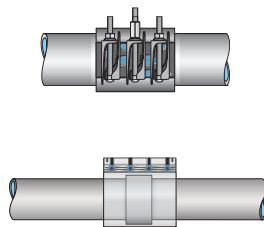
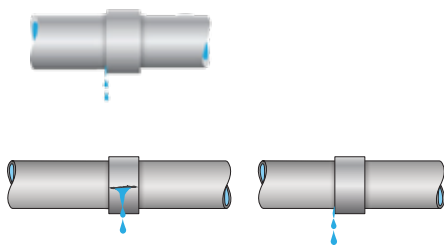
3" - 12"

**HYMAX GRIP**  
Cut-in Sleeve



3" - 12"

PVC Solvent Weld Joint Break



2" - 8"

**HYMAX 773**  
Single Section Full-Seal Clamp

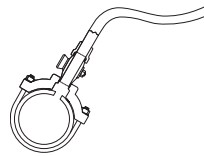


1.5" - 3"

**HYMAX VERSA ENCAPSULATION**  
Wide-Range Coupling

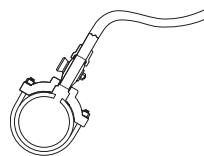


Service Line Tapping



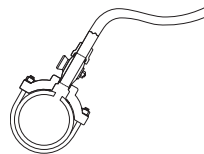
2" - 12"

**HYMAX 13000 SERIES**  
Controlled Bronze Saddle



4" - 24"

**HYMAX BR**  
Bronze Saddle

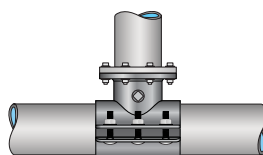


2" - 24"

**HYMAX DR**  
Ductile Saddle

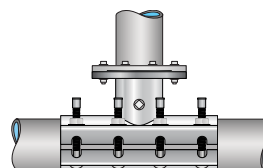


Main Line Tapping



4" - 16"

**HYMAX H306**  
Tapping Sleeve



4" - 24"

**HYMAX H304**  
Tapping Sleeve With SS Flange



PRODUCT	WORKING PRESSURE*-PSI		OVERALL RANGE	DYNAMIC DEFLECTION PER SIDE	
<b>HYMAX®</b> Wide-Range Coupling	1.5" - 16"	260	Up to 2.1" See product label	Up to 4°	
	18" - 24"	232			
	26" - 60"	Call Hymax Technical Support			
<b>HYMAX®</b> Wide-Range Flange Adaptor	1.5" - 24"	175	Up to 2.1" See product label	Up to 4°	
	26" - 60"	Call Hymax Technical Support			
<b>HYMAX®</b> Wide-Range Reducer	1.5" - 16"	260	Up to 2.1" See product label	Up to 4°	
	18" - 24"	232			
	26" - 60"	Call Hymax Technical Support			
<b>HYMAX®</b> Wide-Range Outlets	1.5" - 12"	260	Up to 2.1" See product label	Up to 4°	
	14" and up	Call Hymax Technical Support			
<b>HYMAX® Versa Family</b> Wide-Range Coupling		<b>Std Pressure</b>	<b>High Pressure</b>	Up to 1.4" See product label	Up to 3°
	1.5" - 5"	232	348		
	6" - 20"	175	232		
	24"	160	232		
26" - 70"	Call Hymax Technical Support				
<b>HYMAX® Grip Family</b> Wide-Range Restraint Coupling		232	Up to 1.1" See product label	Up to 4°	
<b>HYMAX® Clamp</b> Wide-Range Clamp		150/200	Up to 0.8" See product label	—	
<b>HYMAX® Dismantling Joint</b>		175	N/A	N/A	

The products fit the following pipe materials - Grip products not recommended for AC or GRP pipes.  
For HDPE, pipe stiffeners are recommended.



NOTE: Leave space between the pipes inside HYMAX, HYMAX VERSA, HYMAX GRIP products to allow for dynamic deflection.



PRODUCT	WORKING PRESSURE* - PSI	RANGE
<b>HYMAX®</b> Snap Clamp	<b>200 Series</b>	
	0.5" - 4"	350
	6", 8"	200
	10", 12"	150
	14", 16"	100
	18" - 24"	60
Size specific by product See product label or catalogue page		
<b>HYMAX®</b> Lug Repair Clamp	<b>500/510 Series</b>	
	2" - 8"	300
	10", 12"	200
	14" - 36"	150
500 Series up to 0.4" See product label 510 Series up to 0.8" See product label		
<b>HYMAX®</b> All Stainless Steel Repair Clamp	<b>520/530 Series</b>	
	2" - 4"	300
	6", 8"	200
	10"	150
	12"	60
	<b>540 Series</b>	
	2" - 12"	150
	<b>550 Series</b>	
	3" - 8"	300
	10", 12"	150
14" - 24"	60	
520 Series up to 0.4" See product label 530 Series up to 0.8" See product label 540 Series up to 0.4" See product label 550 Series up to 0.8" See product label		
<b>HYMAX®</b> O.D. Controlled Saddle for PVC Pipe	200	Size specific by product See product label or catalogue page
<b>HYMAX®</b> Bronze Body Saddle with Bronze or Stainless Steel Straps	200	BR Series up to 1.6" See product label
<b>HYMAX®</b> Ductile Body Saddle with Alloy or Stainless Steel Straps	Single Strap	200
	Double Strap	500
DR Series up to 1.8" See product label		
<b>HYMAX®</b> Fabricated Steel and Stainless Steel Tapping Sleeve	<b>H306</b>	
	4" - 12"	300
	14" - 16"	250
	<b>H304</b>	
	4" - 12"	250
14" - 24"	200	
H306 series up to 0.4" See product label H304 series up to 0.4" See product label		

# PIPE OUTSIDE DIAMETER GUIDE

**IMPORTANT:** Pipe Outside Diameter (OD) Guide is based on the latest pipe standards and information supplied by pipe manufacturers. Due to occasional changes and variance in outside diameters, the pipe OD should always be verified before ordering fittings.

## SMALL DIAMETER PIPE SIZES

Nominal Pipe Size (inches)	½	¾	1	1 ¼
Copper Tubing (CTS)	0.63	0.88	1.13	1.38
Steel Pipe - Schedule 40	0.84	1.05	1.32	1.66
Plastic Pipe - (PVC) - STD			1.32	
Polythylene Pipe IPS		1.05	1.32	1.66

## STANDARD PRESSURE PIPE SIZES

Nominal Pipe Size (inches)	1½	2	2½	3	4	5	6	8	10	12	14
Copper Tubing (CTS)	1.63	2.13	2.63	3.13	4.13	5.13	6.13				
Steel Pipe - Schedule 40	1.90	2.38	2.88	3.50	4.50	5.56	6.63	8.63	10.75	12.75	14.00
Plastic Pipe - (PVC) - STD	1.90	2.38	2.88	3.50	4.50		6.63	8.63	10.75	12.75	14.00
Plastic (PVC) C-900/C-905/C-909					4.80		6.90	9.05	11.10	13.20	15.30
PVC Sewer Pipe					4.22	5.64	6.28	8.40	10.50	12.50	
Polythylene Pipe IPS	1.90	2.38		3.50	4.50	5.56	6.63	8.63	10.75	12.75	14.00
Polythylene Pipe DI Size					4.80		6.90	9.05	11.10	13.20	
Plastic Irrigation					4.13		6.14	8.16	10.20	12.24	

Nominal Pipe Size (inches)	15	16	18	20	24	30	36	42	48	54	60
Copper Tubing (CTS)											
Steel Pipe - Schedule 40		16.00	18.00	20.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00
Plastic Pipe - (PVC) - STD		16.00	18.00	20.00	24.00	30.00	36.00				
Plastic (PVC) C-900/C-905/C-909		17.40	19.50	21.60	25.80	32.00	38.30	44.50	50.80		
PVC Sewer Pipe	15.30		18.70		24.80						
Polythylene Pipe IPS		16.00	18.00	20.00	24.00	30.00	36.00	42.00	48.00		
Polythylene Pipe DI Size		17.40	19.50	21.60	25.80		38.30	44.50	50.80		
Plastic Irrigation	15.30		18.70		24.80						

PE Tubing can be CTS

## CAST AND DUCTILE IRON PIPE

Nominal Pipe Size (inches)	1½	2	2½	3	4	5	6	8	10	12	14
Ductile Iron Pipe				3.96	4.80		6.90	9.05	11.10	13.20	15.30
Class 100-250 AWWA Centrifugally Cast				3.96	4.80		6.90	9.05	11.10	13.20	15.30
Class A AWWA Pit Cast		2.50		3.80	4.80		6.90	9.05	11.10	13.20	15.30
Class B AWWA Pit Cast				3.96	5.00		7.10	9.05	11.10	13.20	15.30
Class C AWWA Pit Cast				3.96	5.00		7.10	9.30	11.40	13.50	15.65
Class D AWWA Pit Cast				3.96	5.00		7.10	9.30	11.40	13.50	15.65
Soil Pipe		2.30		3.30	4.30	5.30	6.30	8.40	10.50	12.50	

Nominal Pipe Size (inches)	15	16	18	20	24	30	36	42	48	54	60
Ductile Iron Pipe		17.40	19.50	21.60	25.80	32.00	38.30	44.50	50.80	57.10	61.61
Class 100-250 AWWA Centrifugally Cast		17.40	19.50	21.60	25.80	32.00	38.30	44.50	50.80		
Class A AWWA Pit Cast		17.40	19.50	21.60	25.80	31.74	37.96	44.20	50.50	56.66	62.80
Class B AWWA Pit Cast		17.40	19.50	21.60	25.80	32.00	38.30	44.50	50.80	57.10	63.40
Class C AWWA Pit Cast		17.80	19.92	22.06	26.32	32.00	38.70	45.10	51.40	57.80	64.20
Class D AWWA Pit Cast		17.80	19.92	22.06	26.32	32.74	39.16	45.58	51.98	58.40	64.82
Soil Pipe	15.62										

# ASBESTOS CEMENT PIPE

Krausz manufactures products to fit cast iron pipe classes E, F, G and H. Please call for more information.

## CLASS 100

Nominal Pipe Size (inches)	1½	2	2½	3	4	5	6	8	10	12	14	15	16	18	20	24	30
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

Nominal Pipe Size (inches)	1½	2	2½	3	4	5	6	8	10	12	14	15	16	18	20	24	30
Machined End				3.84	4.81		6.91	9.11	11.66	13.92	16.22		18.46	20.94	23.28	27.96	35.00
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

Nominal Pipe Size (inches)	1½	2	2½	3	4	5	6	8	10	12	14	15	16	18	20	24	30
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				

\*Flintite ME is 10.89 for 10" and 12.99 for 12" sizes



**CAUTION - ASBESTOS AND OTHER MATERIALS MAY CAUSE CANCER AND DAMAGE TO LUNGS. DO NOT BREATHE DUST, AVOID CREATING DUST.**

Seek Expert Advice For Breathing Protection And Protective Equipment Call OSHA 1-800-321-6742 for more information

To learn more, visit [HymaxUSA.com](http://HymaxUSA.com).

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