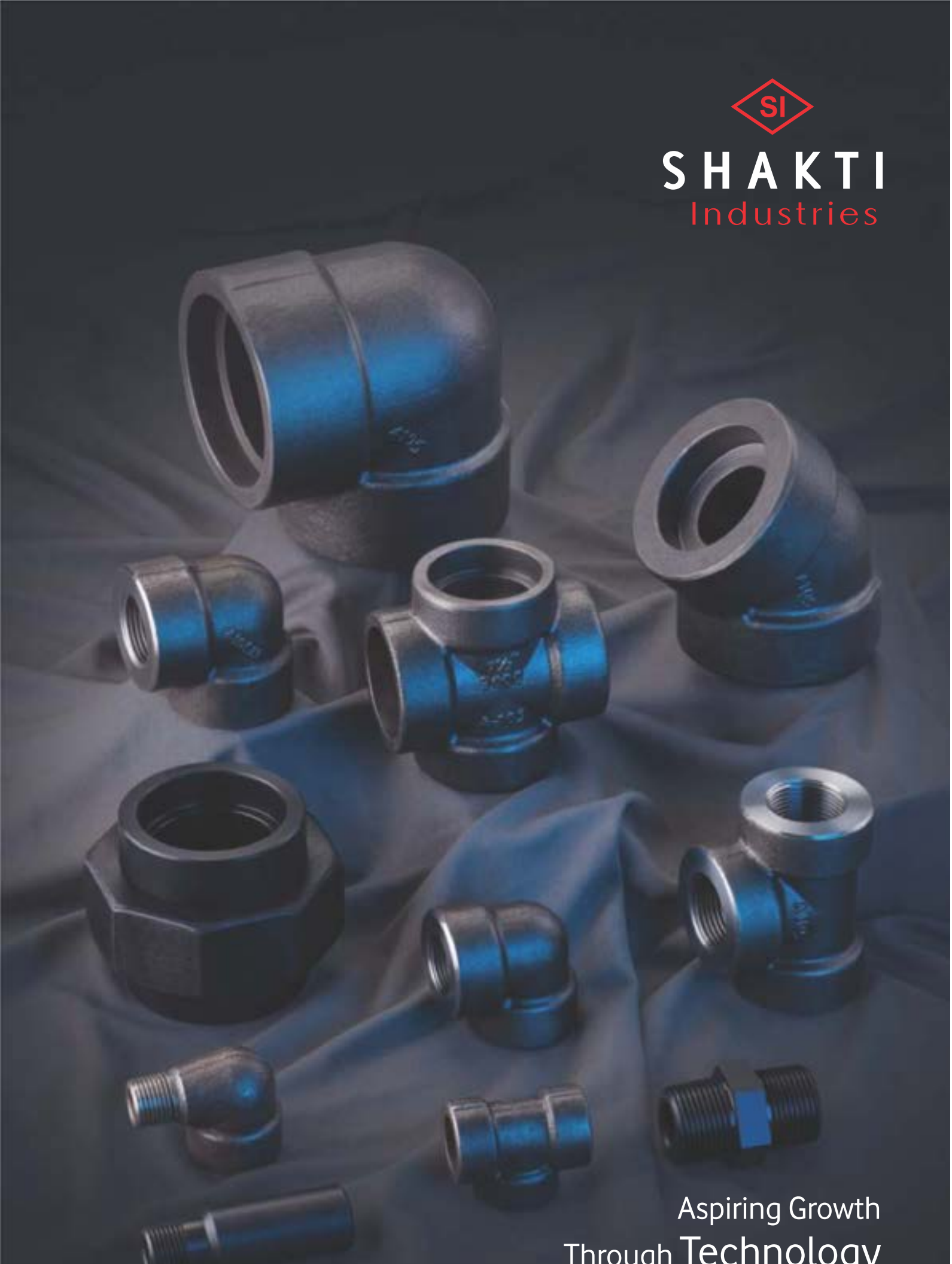
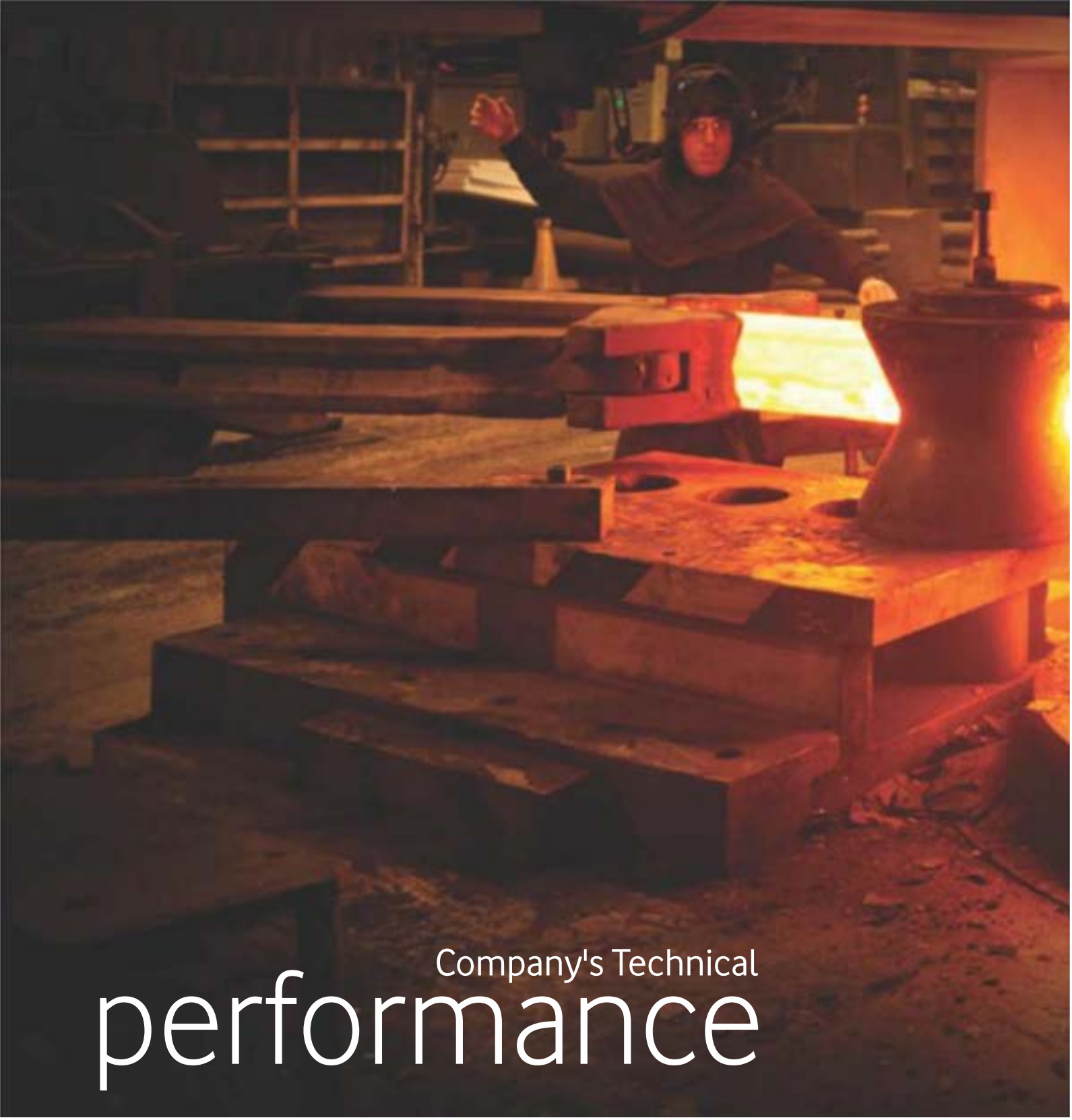

SI
SHAKTI
Industries
Aspiring Growth
Through Technology



Company's Technical

performance

Shakti Industries produces high quality forged steel fittings and unions, available in an array of classes & material grades for any application.

All connections, under constant engineering review, meet high quality standards. Each piece must pass through strict inspection before leaving the factory. Our stringent evaluations focus on material control, manufacturing quality and design control.

Our forge shop has complete lines of forging and support equipment and automated production lines. Next generation machining system delivers high volume capabilities with uncompromising

Material Grades

ASTM and ASME steel forgings

Carbon Steels :

- A105, A266 C11 to C14, SA765 Gr.2
- A372 Gr.A / Gr.B
- A350 LF2 C11 to C13 for low temperature service
- A516 Gr.60 and Gr.70
- S45C
- A738C / S355J2 / 1.0577

Low alloy steels

Ferritic alloy steel forgings for high-pressure and high-temperature parts, such as boilers and pressure vessels.

- A182 / A336 F1, F5, F9, F11, F22, F91, F92

Austenitic stainless steels

- A182 F304 / 304L (UNS S30403), F310 (UNS S31000)
- A182 F316/316L (UNS S31603), F316Ti, F317/317L (UNS S31703)
- A182 F321 (UNS S32100), F347 (UNS S34700)
- A182 F44 (254SMO), 904L (UNS N08904)
- 17-4 PH, 15-5 PH (SUS 630)

Alloy Steels (for machine building)

- 42CrMo4 (Q+T) / AISI 4140 / DIN EN 1.7225
- 25CrMo4 / AISI 4130 / DIN EN 1.7213
- 34CrNiMo6 / AISI 4340 / DIN EN 1.6582
- AISI 8660 Tripel Alloy Steel

High Strength / high yeild carbon steels

- A694 F42, F45, F52, F55, F60, F65, F70

Ferritic stainless steels

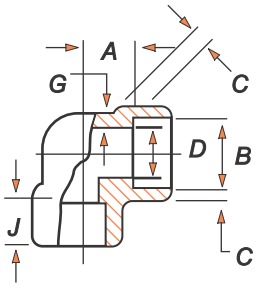
- A182 F429, F430, F440A

Martensitic stainless steels

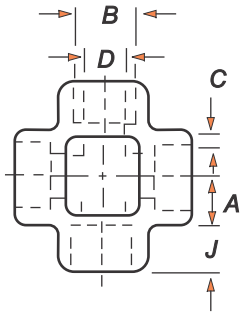
- A182 F6a, A182 F6NM

SOCKET - WELDING FITTINGS

SHAKTI



90° ELBOW



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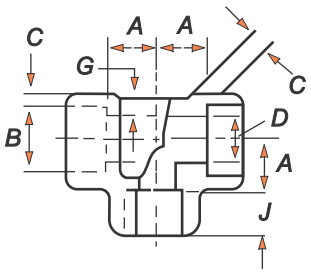

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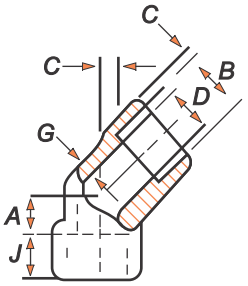

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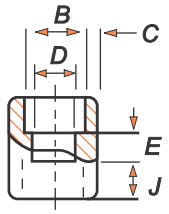
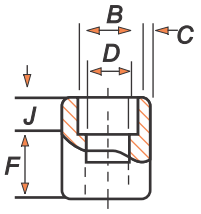
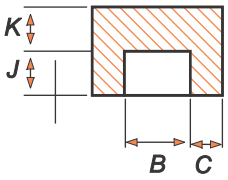


FULL COUPLING



HALF- COUPLING



CAP

DIMENSIONS OF SOCKET - WELDING FITTINGS (ANSI B16.11)

Nominal Pipe Size		B	D			C						G			J	A						E	F	A	E	F	End Wall Thickness K_{min}		
		Socket Bore dia. B (Note [1])	Bore Diameter of Fittings, D [Note (1)]			Socket Wall Thickness, C						Body Wall			Min Depth of Socket	Center to Bottom of Socket, A						Laying Lengths		Tolerances ±			Class Designation		
			Class Designation			Class Designation						Class Designation				90 deg Elbows, Tees and Crosses			45 dog Elbows										
						3000		6000		9000						Class Designation						Coupl-ings,	Half Coupl-ings,						
(mm)	(Inch)		3000	6000	9000	Agv.	Min.	Agv.	Min.	Agv.	Min.	Min.	Min.	Min.	J	3000	6000	9000	3000	6000	9000	E	F	A	E	F	3000	6000	9000
6	1/8	11.2	7.6	4.8	.....	3.18	3.18	3.96	3.43	.....	.....	2.41	3.15	.....	9.5	11.0	11.0	.....	8.0	8.0	.....	6.5	16.0	1.0	1.5	1.0	4.8	6.4	.....
		10.8	6.1	3.2	.....																								
8	1/4	14.6	10.0	7.1	.....	3.78	3.30	4.60	4.01	.....	.....	3.02	3.68	.....	9.5	11.0	13.5	.....	8.0	8.0	.....	6.5	16.0	1.0	1.5	1.0	4.8	6.4	.....
		14.2	8.5	5.6	.....																								
10	3/8	18.0	13.3	9.9	.....	4.01	3.50	5.03	4.37	.....	.....	3.20	4.01	.....	9.5	13.5	15.5	.....	8.0	11.0	.....	6.5	17.5	1.5	3.0	1.5	4.8	6.4	.....
		17.6	11.8	8.4	.....																								
15	1/2	22.2	16.6	12.5	7.2	4.67	4.09	5.97	5.18	9.35	8.18	3.73	4.78	7.47	9.5	15.5	19.0	25.5	11.0	12.5	15.5	9.5	22.5	1.5	3.0	1.5	6.4	7.9	11.2
		21.8	15.0	11.0	5.6																								
20	3/4	27.6	21.7	16.3	11.8	4.90	4.27	6.96	6.04	9.78	8.56	3.91	5.56	7.82	12.5	19.0	22.5	28.5	13.0	14.0	19.0	9.5	24.0	1.5	3.0	1.5	6.4	7.9	12.7
		27.2	20.2	14.8	10.3																								
25	1	34.3	27.4	21.5	16.0	5.69	4.89	7.92	6.93	11.38	9.96	4.55	6.35	9.09	12.5	22.5	27.0	32.0	14.0	17.5	20.5	12.5	28.5	2.0	4.0	2.0	9.6	11.2	14.7
		33.9	25.9	19.9	14.4																								
32	1.1/4	43.1	35.8	30.2	23.5	6.07	5.28	7.92	6.93	12.14	10.96	4.85	6.35	9.70	12.5	27.0	32.0	35.0	17.5	20.5	22.5	12.5	30.0	2.0	4.0	2.0	9.6	11.2	14.2
		42.7	34.3	28.7	22.0																								
40	1.1/2	49.2	41.6	34.7	28.7	6.35	5.54	8.92	7.80	12.70	11.12	5.08	7.14	10.15	12.5	32.0	38.0	38.0	20.5	25.5	25.5	12.5	32.0	2.0	4.0	2.0	11.2	12.7	15.7
		48.8	40.1	33.2	27.2																								
50	2	61.7	53.3	43.6	38.9	6.93	6.04	10.92	9.50	13.84	12.12	5.54	8.74	11.07	16.0	38.0	41.0	54.0	25.5	28.5	28.5	19.0	41.0	2.0	4.0	2.0	12.7	15.7	19.0
		61.2	51.7	42.1	37.4																								
65	2.12	74.4	64.2	.....	.....	8.76	7.67	.....	.....	.....	.....	7.01	.....	.....	16.0	41.0	.....	.....	28.5	.....	.....	19.0	43.0	2.5	5.0	2.5	15.7	19.0	.....
		73.9	61.2	.....	.....																								
80	3	90.3	79.4	.....	.....	9.52	8.30	.....	.....	.....	.....	7.62	.....	.....	16.0	57.0	.....	.....	32.0	.....	.....	19.0	44.5	2.5	5.0	2.5	19.0	22.4	.....
		89.8	76.4	.....	.....																								
100	4	115.7	103.8	.....	.....	10.69	9.35	.....	.....	.....	.....	8.56	.....	.....	19.0	66.5	.....	.....	41.0	.....	.....	19.0	48.0	2.5	5.0	2.5	22.4	28.4	.....
		115.2	100.7	.....	.....																								

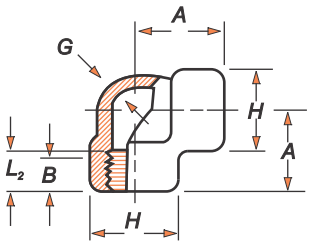
*Uppar and lower values for each size are the respective maximum and minimum dimensions.

SOCKET - WELD AND THREADED UNION

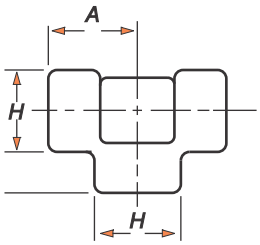
and FORGED THREADED FITTINGS

SHAKTI

Industries



90° ELBOW



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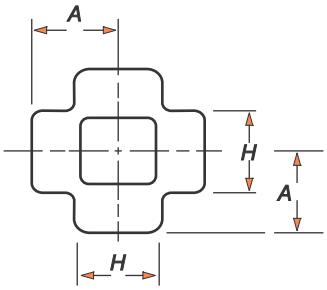

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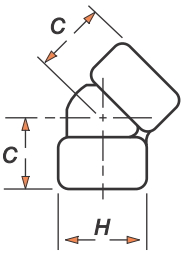
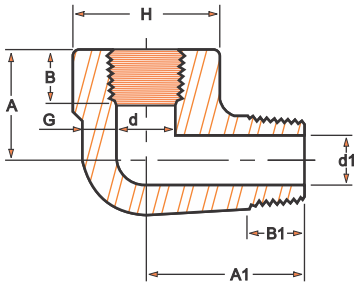


45° ELBOW

DIMENSIONS OF FORGED THREADED FITTINGS [ANSI B 16.11]

Nominal Pipe Size		A — Center-to-End Elbows, Tees, Crosses, A			C — Center-to-End 45 deg Elbow, C			H — Outside Diameter of Band, H			G — Min. Wall Thickness, G			B — Min. Length of Thread	
(mm)	(Inch)	2000	3000	6000	2000	3000	6000	2000	3000	6000	2000	3000	6000	B	L2
6	1/8	21	21	25	17	17	19	22	22	25	3.18	3.18	6.35	6.4	6.7
8	1/4	21	25	28	17	19	22	22	25	33	3.18	3.30	6.60	8.1	10.2
10	3/8	25	28	33	19	22	25	25	33	38	3.18	3.51	6.98	9.1	10.4
15	1/2	28	33	38	22	25	28	33	38	46	3.18	4.09	8.15	10.9	13.6
20	3/4	33	38	44	25	28	33	38	46	56	3.18	4.32	8.53	12.7	13.9
25	1	38	44	51	28	33	35	46	56	62	3.68	4.98	9.93	14.7	17.3
32	1.1/4	44	51	60	33	35	43	56	62	75	3.89	5.28	10.59	17.0	18.0
40	1.1/2	51	60	64	35	43	44	62	75	84	4.01	5.56	11.07	17.8	18.4
50	2	60	64	83	43	44	52	75	84	102	4.27	7.14	12.09	19.0	19.2
65	2.1/2	76	83	95	52	52	64	92	102	121	5.61	7.65	15.29	23.6	28.9
80	3	86	95	106	64	64	79	109	121	146	5.99	8.84	16.64	25.9	30.5
100	4	106	114	114	79	79	79	146	152	152	6.55	11.18	18.67	27.7	38.0

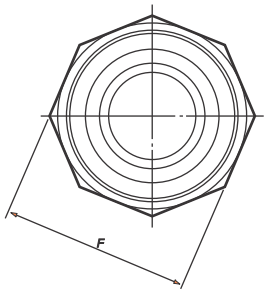


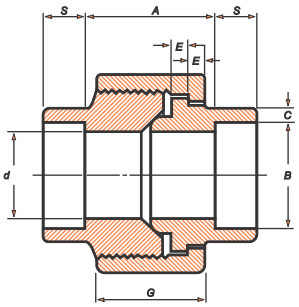
STREET ELBOWS

Dim / Nom. Pipe Size	H	A	d — A1		d — d1	G (Min)	B (Min)	B1 (Min)	H	A	d — A1		d — d1	G (Min)	B (Min)	B1 (Min)
	3000Lbs								6000Lbs							
¼	25	22.2	31.7	11.2	7	3.30	8.0	10.3	33	25.4	38.1	11.2	3.0	6.60	8.0	10.3
⅜	33	25.4	38.1	14.5	9	3.51	9.0	10.4	38	28.6	41.2	14.5	4.7	6.98	9.0	10.4
½	38	28.6	41.2	15.7	13	4.09	11.0	13.6	46	34.9	47.6	15.7	6.3	8.15	11.0	13.6
¾	46	34.9	47.6	20.9	16	4.32	12.5	13.8	56	44.5	57.2	20.9	11.1	8.53	12.5	13.8
1	56	44.5	57.2	26.6	20	4.98	14.5	17.3	62	50.8	66.7	26.6	15.2	9.93	14.5	17.3
1-¼	62	50.8	66.7	35.0	28	5.28	17.0	18.0	75	54.0	71.4	35.0	22.8	10.59	17.0	18.0
1-½	75	54.0	71.4	40.9	30	5.56	18.0	18.4	84	63.5	84.0	40.9	27.9	11.07	18.0	18.4
2	84	63.5	84.0	52.5	40	7.14	19.0	19.3	-	-	-	-	-	-	-	-

Dimensions in Millimeters

"H" Dimension to ASME 16.11

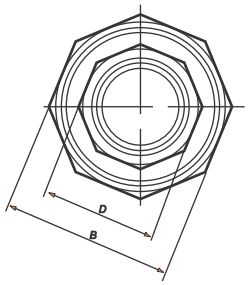


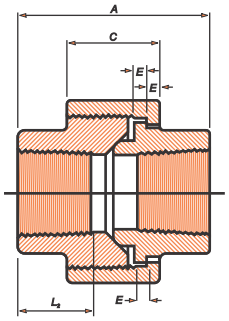


SOCKET - WELDING FITTINGS - DIMENSIONS OF UNIONS BS-3799 1974

Nominal Size		S	A	B	C	d	E	F	G
		3000							
		Depth of Socket (min.) S	Distance between bottoms of sockets (min.) A	Bore diameter of sockets (min.) B	Socket wall thickness (min.) C	Bore diameter of union d*	Thickness of shoulder (min.) E	Width A/F of nut (min.) F	Height of nut (min.) G
in	mm	mm	mm	mm	mm	mm	mm	mm	mm
⅛	(6)	10	17	10.7	3.2	6.8	3.2	32	16
¼	(8)	10	17	14.1	3.3	9.2	3.2	32	18
⅜	(10)	10	17	17.6	3.5	12.5	3.2	36	19
½	(15)	10	18	21.8	4.1	15.5	4.0	41	21
¾	(20)	13	20	27.4	4.3	21.0	4.8	50	24
1	(25)	13	26	34.1	5.0	26.5	4.8	60	25
1 ¼	(32)	13	28	42.9	5.3	35.0	5.6	70	29
1 ½	(40)	13	30	49.0	5.6	40.5	5.6	78	30
2	(50)	16	36	61.0	6.1	52.0	6.4	95	37
2 ½	(65)	16	57	73.8	7.7	62.0	9.6	125	48
3	(80)	16	70	89.7	8.3	78.0	12.7	140	51

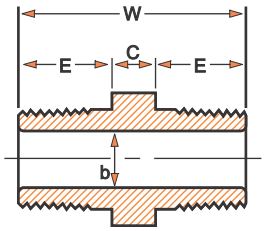
*Bore diameter d corresponds to schedule 40 pipe. Subject to tolerances see 2.6.
*Outside diameter of pipe must be specified if dimensions are not in accordance with BS 1600.



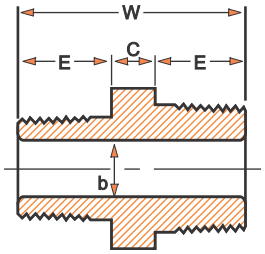


SCREWED FITTINGS DIMENSIONS OF UNIONS BS-3799 1974

Material Size		A	B	C	D	E
		3000				
		End to End A	Width A/F taken nut (min.) B	Height of union nut (min.) C	Width A/F of ends (min.) D	Thickness of Shoulder (min.) E	Length of thread (min.) L1
in	mm	mm	mm	mm	mm	mm	mm
⅛	(6)	40	32	16	17	3.2	6.70
¼	(8)	43	32	18	19	3.2	10.21
⅜	(10)	48	36	19	22	3.2	10.36
½	(15)	51	43	21	30	4.0	13.56
¾	(20)	57	50	24	36	4.8	13.86
1	(25)	64	60	25	41	4.8	17.34
1 ¼	(32)	70	70	29	50	5.6	17.93
1 ½	(40)	79	78	30	60	5.6	18.38
2	(50)	89	95	37	70	6.4	19.22
2 ½	(65)	118	125	48	85	9.6	28.89
3	(80)	121	140	51	100	12.7	30.48



FULL SIZE

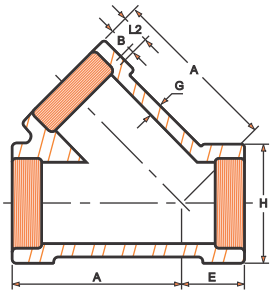


REDUCING SIZE

HEX NIPPLES THREADED BS-3799 1974

Nominal Size		A	W	E	b		C	F
					3000	6000		
DN	Inch	(Min.)	(Min.)	(Min.)	(Min.)	(Min.)	(Min.)	(Min.)
6	⅛"	11	26	10	5	2	6	-
8	¼"	15	36	15	8	6	6	-
8x6	¼"x⅛"	15	31	15	5	2	6	10
10	⅜"	18	40	16	11	8	8	-
10x8	⅜"x¼"	18	39	16	8	6	8	15
15	½"	22	48	20	14	11	8	-
15x10	½"x⅜"	22	44	20	11	8	8	16
15x8	½"x¼"	22	43	20	8	6	8	15
20	¾"	27	52	21	19	13	10	-
20x15	¾"x½"	27	50	21	14	11	9	20
20x10	¾"x⅜"	27	46	21	11	8	9	16
25	1"	35	60	25	24	17	10	-
25x20	1"x¾"	35	56	25	19	13	10	21
25x15	1"x½"	35	55	25	14	11	10	20
40	1-½"	50	68	26	38	30	16	-
40x25	1-½"x1"	50	67	26	24	17	16	25
40x20	1-½"x¾"	50	63	26	19	13	16	21
40x15	1-½"x½"	50	62	26	14	11	16	20
50	2"	62	71	27	49	39	17	-
50x40	2"x1-½"	62	70	27	38	30	17	26
50x25	2"x1"	62	70	27	24	17	18	25
50x20	2"x¾"	62	65	27	19	13	17	21
50x15	2"x½"	62	65	27	14	11	18	20

* Dimensions in millimeter.



45° Lateral Tee Threaded

		B	L	A	E	G	H	B	L	A	E	G	H
		2000LB						3000LB					
DN	Nom. Pipe Size	Length of Thread (Min)		A	E	G(2) (Min)	H(2)	Length of Thread (Min)		A	E	G(2) (Min)	H(2)
		B(3)	L2(3)					B(3)	L2(3)				
15	½"	10.9	13.6	46	20	3.18	33	10.9	13.6	55	23	4.09	38
20	¾"	12.7	13.9	55	23	3.18	38	12.7	13.9	65	26	4.32	46
25	1"	14.7	17.3	65	26	3.68	46	14.7	17.3	73	31	4.98	56
32	1-¼"	17.0	18.0	73	31	3.89	56	17.0	18.0	82	35	5.28	62
40	1-½"	17.8	18.4	82	35	4.01	62	17.8	18.4	113	42	5.56	75
50	2"	19.0	19.2	113	42	4.27	75	19.0	19.2	136	56	7.14	84
65	2-½"	23.6	28.9	136	56	5.61	92	-	-	-	-	-	-

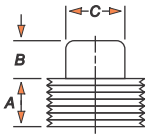
(1) Dimensions in Millimeters.
(2) Dimensions refer to ANSI B16.11
(3) Dimensions of BSP and PT are available if required.
(4) Dimensions may vary according to the customer's and manufacturer's requirement.
(5) Dimension B is minimum length of perfect thread.
The length of useful thread (B plus threads with fully formed roots and flat crests) shall not be less than L2 (effective length of external thread) required by American National Standard for pipe threads (ANSI/ASME B1.20.1)

PLUGS & BUSHINGS

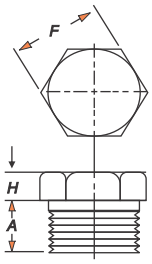
and THREAD FITTINGS

SHAKTI

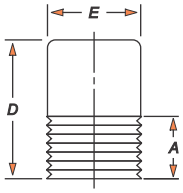
Industries



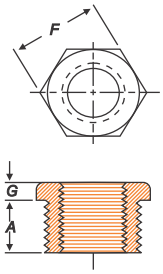
SQUARE HEAD PLUG



HEX HEAD PLUG



ROUND HEAD PLUG

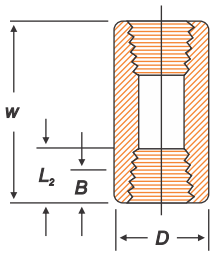


HEX HEAD BUSHING

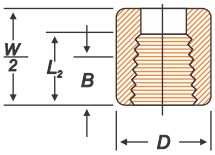
FLUSH BUSHING

DIMENSIONS OF PLUGS & BUSHINGS [ANSI B 16.11]

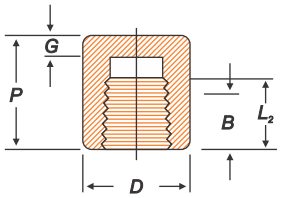
Nominal Pipe Size (mm)	Nominal Pipe Size (Inch)	A	B	C	E	D	F	G	H
			Square Head Plugs		Round Head Plugs		Hex Plugs and Bushings		
		Min. Length A	Min. Square Height B	Min. Width Flats, C	Nominal Head Diameter E	Min. Length D	Nominal Width Flats F	Min. Hex Height Bushing G	Min. Hex Height Plug H
6	1/8	10	6	7	10	35	11	...	6
8	1/4	11	6	10	14	41	16	3	6
10	3/8	13	8	11	18	41	18	4	8
15	1/2	14	10	14	21	44	22	5	8
20	3/4	16	11	16	27	44	27	6	10
25	1	19	13	21	33	51	36	6	10
32	1. 1.4	21	14	24	43	51	46	7	14
40	1. 1/2	21	16	28	48	51	50	8	16
50	2	22	18	32	60	64	65	9	18
65	2. 1/2	27	19	36	73	70	75	10	19
80	3	28	21	41	89	70	90	10	21
100	4	32	25	65	114	76	115	13	25



COUPLING



HALF COUPLING



CAP

DIMENSIONS OF THREAD FITTINGS [ANSI B 16.11]

Nominal Pipe Size (mm)	Nominal Pipe Size (Inch)	W	P		D		G		B	
		End to End Couplings W	End to End Caps P		Outside Diameter D		Min. End Wall Thickness G		Min. Length of thread	
		3000 & 6000	3000	6000	3000	6000	3000	6000	B	L_2
6	1/8	32	19	...	16	22	4.8	...	6.4	6.7
8	1/4	35	25	27	19	25	4.8	6.4	8.1	10.2
10	3/8	38	25	27	22	32	4.8	6.4	9.1	10.4
15	1/2	48	32	33	28	38	6.4	7.9	10.9	13.6
20	3/4	51	37	38	35	44	6.4	7.9	12.7	13.9
25	1	60	41	43	44	57	9.7	11.2	14.7	17.3
32	1. 1.4	67	44	46	57	64	9.7	11.2	17.0	18.0
40	1. 1/2	79	44	48	64	76	11.2	12.7	17.8	18.4
50	2	86	48	51	76	92	12.7	15.7	19.0	19.2
65	2. 1/2	92	60	64	92	108	15.7	19.0	23.6	28.9
80	3	108	65	68	108	127	19.0	22.4	25.9	30.5
100	4	121	68	75	140	159	22.4	28.4	27.7	33.0

CODES	STANDARDS AND SPECIFICATIONS
	American Society of Mechanical Engineers (ASME)
B16.5	Pipe Flanges and Flanged Fittings.
B16.9	Factory made wrought Steel Butt Weld Fittings
B16.11	Forged Steel Fittings, Socket Welding & Threaded
B16.20	Metallic Gaskets for Pipe Flanges, Ring Joint, Spiral Wound and Jacketed
B16.21	Non Metallic Flat Gaskets for Pipe Fittings
B16.36	Orifice Flanges
B16.47	Large Diameter Steel Flanges
	American Society for Testing and Materials (ASTM)
A 53 / A 53M	For Pipe - Steel, Black and hot dipped, Zinc Coated, Welded & Seamless.
A 105 / A 105M	For Carbon Steel Forgings for Piping application.
A 106	For Seamless Carbon Steel Pipe for High Temperature Services.
A 123	For Zinc (hot-dip galvanized) coatings on Iron and Steel products.
A 182 / A 182 M	For Forged or rolled Alloy-Steel Pipe Flanges, Forged Fittings & Valves and Parts for High Temperature Services.
A 193 / A 193M	For Alloy - Steel and Stainless Steel Bolting materials for High Temperature Services.
A 194 / A 194M	For Carbon and Alloy - Steel nuts for bolts High Pressure or High Temperature Services or Both.
A 234 / A 234M	For Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate & High temperature Services.
A 266 / A 266M	For Carbon Steel Forgings for Pressure Vessel Components.
A 307 / A 307M	For Carbon Steel Bolts and Studs, 60000 Psi, Tensile Strength.
A 320 / A 320M	For Alloy Steel Bolting Materials for Low Temperature Services.
A 325 / A 325M	For Structural Bolts, Steel, heat-treated, 120/105 ksi minimum Tensiile Strength.
A 333 / A 333M	For Seamless & Welded Steel Pipe for Low Temperature Services.
A 335 / A 335M	For Seamless Ferritic Alloy - Steel Pipe for High Temperature Services.
A 350 / A 350M	For Carbon and low Alloy - Steel Forgings, requiring notch toughness testing for Piping Components.
A 403 / A 403M	For Wrought austenitic Stainless Steel Piping Fittings
A 420 / A 420M	For Piping Fittings of wrought Carbon Steel & Alloy - Steel for Low Temperature Services.
A 515 / A 515M	For Pressure Vessel Plates, Carbon Steel for intermediate and Higher Temperature Services.
A 516 / A 516M	For Pressure Vessel Plates, Carbon Steel for Moderate and Lower Temperature Services.
A 694 / A 694M	For Carbon & Alloy Steel Forgings For Pipe Flanges, Fittings Valves & Parts for High Pressure transmission Service
(A - Prefix), 105 - Sequential Number. M means that this specifications contains metric unit. 10 - the year of latest version.	
	National Association of Corrosion Engineers (NACE)
MR 0175 - (03)	Metals for Sulfide Stress Cracking and Stress Corrosion Cracking resistance in sour Oil field environments.
	American Water Works Association (AWWA)
C207 - 01	Steel Pipe Flanges for Water Works Services - Size 4" - 144" (100 - 3600 mm)

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CarbonPress®

By Merit Brass Co.

2024

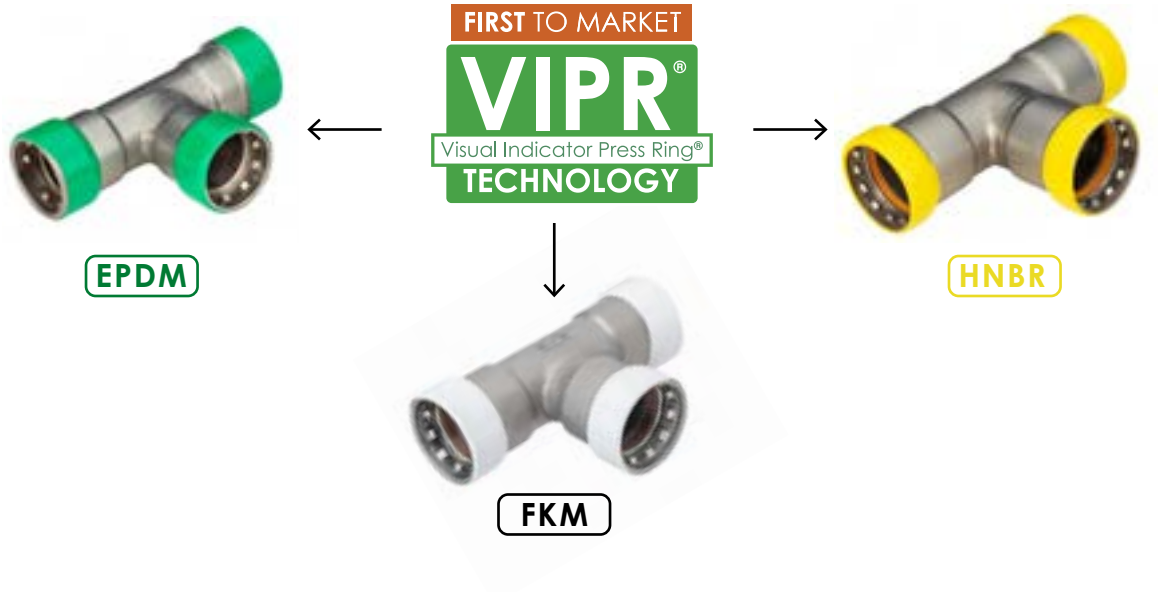
PRODUCT CATALOG

MERIT BRASS
DIRECTING THE FLOW OF *Quality*

Merit Brass Co.
One Merit Dr. • PO Box 43127
Cleveland, OH 44143

CarbonPress® is Merit Brass' solution for professionals choosing to join steel pipes through the use of press technology. **CarbonPress®** is focused on quality, safety, reliability, and ease of use.

- ½" – 4" including couplings, elbows, tees, adapters, coupling reducers, unions, and flange adapters.
- Extensive offering of reducing tees.
- Dual leak detection feature identify uncrimped connections:
  - **Mechanical Leak Before Press (LBP) sealing elements.**
  - **FIRST TO MARKET Visual Indicator Press Ring® (VIPR®)** – facilitates immediate identification of unpressed connections as well as application – green = EPDM (water), yellow = HNBR (gas) and brown = industrial.
- Compatible with most common pressing tools and jaws in the market.
- EPDM (Ethylene Propylene Diene Monomer), HNBR (Hydrogenated Nitrile Butadiene Rubber) and FKM (Fluoroelastomer) seals are factory-installed & lubricated.
- Packaged in common industry quantities.
- Box, bag and ring are color-coded to the sealing element.
- Most comprehensive package with **over 400 SKUs.**



Merit Brass reserves the right to change any portion of the information shown in this product catalog without obligation to change **CarbonPress®** products previously or subsequently sold.

See meritbrass.com for most current information.

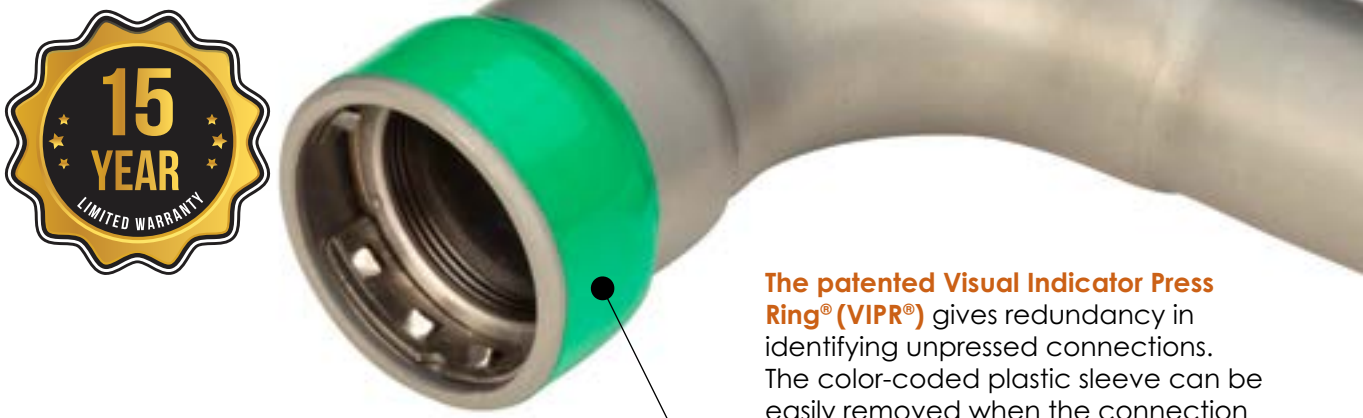
WHY CARBONPRESS® FITTINGS?

CarbonPress® is a ½" – 4" carbon steel press fitting system suitable for use on black iron, epoxy coated, and galvanized schedule 10 to 40 carbon steel pipe.

When pressed, a grab ring deforms and its sharp edges grip the outside diameter of the pipe, securing the fitting axially and preventing movement. At the same time an elastomeric sealing element impinges on the pipe, creating a leak tight seal. Press technology has a multi-decade history of successful use in applications including hydronic heating and fire sprinkler systems and the conveyance of fluids, gases, oils, and low pressure steam.

FEATURES & BENEFITS

15-year limited warranty on our **CarbonPress®** offering.



The patented Visual Indicator Press Ring® (VIPR®) gives redundancy in identifying unpressed connections. The color-coded plastic sleeve can be easily removed when the connection is pressed, and also indicates the sealing element material preventing costly and potentially unsafe installation errors.

Most Comprehensive Package with over 400 SKUs

Corrosion resistant Zn-Ni plating ensures years of trouble-free service.

Box, bag and ring are color-coordinated to the sealing element for ease of receipt and identification.

Grab Ring deforms and grips outside diameter of pipe

Engineered sealing elements are designed to leak before they are pressed, giving a visual indication of a connection that has not been pressed.

SYSTEM DATA

CarbonPress® Codes and Standards

- ASME B31.1 Power Piping
- ASME B31.3 Process Piping
- ASME B31.9 Building Service Piping
- CSA B149.1 Natural Gas and Propane Installation Code
- IAPMO Uniform Mechanical Code (UMC)
- IAPMO Uniform Plumbing Code (UPC)

CarbonPress® Certifications

- IAPMO Z 1117 (EPDM and FKM)
- IAPMO/ANSI LC 4/CSA 6.32 (HNBR)

CarbonPress® Temperature & Pressure

- **Surface Protection:** Corrosion Resistant Zn-Ni Plating

EPDM

- **Temperature Range:** -40°F to 300°F (-40°C to 148°C)
- **Working Pressure:** range from full vacuum to 250 psi (17.2 bar) for water

HNBR

- **Temperature Range:** -40°F to 200°F (-40°C to 93°C)
- **Working Pressure:** 125 psi (8.6 bar) for gas

FKM

- **Temperature Range:** 14°F to 293°F (-10°C to 145°C)
- **Working pressure:** 200 psi (13.7 bar) for industrial applications

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Limited Warranty

We stand behind the quality of our products and offer a **15-year limited warranty*** on our **CarbonPress®** offering. We guarantee that our fittings will be free from defects in materials and workmanship for 15 years from the date of purchase. If any of our fittings fail due to defects during this time, we will replace or repair the product at no cost to the customer.

*This warranty does not cover damage caused by improper installation, misuse, or normal wear and tear.

TOOLING REFERENCE GUIDE

CarbonPress® Tools, Kits, Jaws and Rings							
Size	**Milwaukee Part #**	**Tooling Name**	**Adapter**	**Ridgid Part #**	**Tooling Name**	**Adapter**	**Press Profile**
0.5" - 2"	2773-20	M18 Force Logic Press Tool		67063	RP 350 Press Tool		
0.5" - 1"	49-16-2696	M18 Black Iron Press Kit (0.5" - 1")		48558	Press Jaw Kit (0.5" - 1")		
0.5" - 2"	49-16-2697	M18 Black Iron Press Kit (0.5" - 2")		48553	Press Jaw Kit (0.5" - 2")		
2.5" - 4"	2773-20L	M18 Force Logic Long Throw Press Tool		60658	Press Booster		
0.5"	49-16-2650B	0.5" M18 Black Iron Press Jaw		37958	0.5" Press Jaw		IPS - Grab Ring
0.75"	49-16-2651B	0.75" M18 Black Iron Press Jaw		37963	0.75" Press Jaw		IPS - Grab Ring
1"	49-16-2652B	1" M18 Black Iron Press Jaw		37968	1" Press Jaw		IPS - Grab Ring
1.25"	49-16-2653B	1.25" M18 Black Iron Press Ring	49-16-2659	37973	1.25" Press Ring	21878	IPS - Grab Ring
1.5"	49-16-2654B	1.5" M18 Black Iron Press Ring	49-16-2659	37978	1.5" Press Ring	21878	IPS - Grab Ring
2"	49-16-2655B	2" M18 Black Iron Press Ring	49-16-2659	37983	2" Press Ring	21878	IPS - Grab Ring
2.5"	49-16-2656B	2.5" M18 Black Iron Press Ring	49-16-2659	60643	2.5" Press Ring	Press Booster	IPS - Grab Ring
3"	49-16-2657B	3" M18 Black Iron Press Ring	49-16-2659	60648	3" Press Ring	Press Booster	IPS - Grab Ring
4"	49-16-2658B	4" M18 Black Iron Press Ring	49-16-2659	64653	4" Press Ring	Press Booster	IPS - Grab Ring
1.25" - 2"	49-16-2659	Ring Jaw 1		21878	V2 Press Ring Actuator		
2.5" - 4"	49-16-2659S	Ring Jaw 2					
2.5" - 4"	49-16-2698	M18 Black Iron Press Kit XL (2.5" - 4")		60638	Press Booster with Press Rings (2.5" - 4")		

CarbonPress®, *by Merit Brass Co. products can be used with Milwaukee, REMS, Ridgid, and Rothenberger tools with the associated Jaws for Carbon Steel/Black Iron Pipe. Please contact Merit Brass Co. for additional information.*

CarbonPress® fittings can be pressed with Milwaukee or Ridgid tools and associated jaws/rings for carbon steel applications. **Above is a table of Milwaukee and Ridgid's part numbers for your reference.**

SEALING APPLICATIONS

Fitting Housing

Made from ASTM A420 Carbon Steel with a Zn-Ni plating. See below for common applications.

Working Pressure

Working Pressure Range from Full Vacuum to 250 psi (17.2 bar) Water, 125 (8.6 bar) psi Gas and 200 psi for Industrial.

EPDM SEALING ELEMENT		
EPDM	Ethylene-propylene-diene monomer	
Color	Black	
Temperature	-40°F to 300°F (-40°C to 148°C)	
Manufacturing Process	Synthetically manufactured & peroxidically cross-linked	
Benefits of Sealing Element	Excellent oxidation resistance	

Details of approved applications may be found on page 6. NOT COMPATIBLE WITH HYDROCARBONS.

HNBR SEALING ELEMENT		
HNBR	Hydrogenated Nitrile Butadiene Rubber	
Color	Yellow	
Temperature	-40°F to 200°F (-40°C to 93°C)	
Manufacturing Process	Synthetically manufactured & peroxidically cross-linked	
Benefits of Sealing Element	Excellent resilience and tear resistance	

Details of approved applications may be found on page 7. NOT COMPATIBLE WITH HYDROCARBONS.

FKM SEALING ELEMENT		
FKM	Fluoroelastomer	
Color	Brown	
Temperature	14°F to 293°F (-10°C to 145°C)	
Manufacturing Process	Synthetically manufactured & peroxidically cross-linked	
Benefits of Sealing Element	Retains mechanical properties at elevated temperatures	

Details of approved applications may be found on page 8. NOT COMPATIBLE WITH HYDROCARBONS.

APPROVED APPLICATIONS

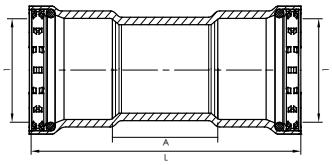
Types Of Service		System Operating Conditions				Carbonpress® Seals		
		Notes	Pressure (EPDM/HNBR)	Pressure (FKM)	Temperature	EPDM (Water)	FKM (Ind.)	HNBR (Gas)
FLUIDS/ WATER	Chilled Water	Ethylene Glycol, ProPylene Glycol	230 psi	200 psi	Min. -40°F	✓	✓	
	Fire Sprinkler	Compliant with UL & FM for NFPA 13, 13D & 13R	175 psi	175 psi	Ambient	✓	✓	
	Hydronic Heating	Ethylene Glycol, Propylene Glycol	230 psi	200 psi	300°F	✓	✓	
	Low-Pressure System Steam		15 psi max.	15 psi Max.	300°F	✓	✓	
GASES	Argon		230 psi	200 psi	Max. 140°F	✓	✓	✓
	Carbon Dioxide		230 psi	200 psi	Max. 140°F	✓	✓	✓
	Compressed Air	Oil Concentrate <25mg/m3	230 psi	200 psi	Max. 140°F	✓	✓	✓
		Oil Concentrate >25mg/m3	230 psi	200 psi	Max. 140°F		✓	✓
	Natural Gas, LP Gas and Fuel Oil		125 psi max.	125 psi Max.	-40°F to 180°F		✓	✓
	Nitrogen		230 psi	200 psi	Max. 140°F	✓	✓	✓
	Vacuum		29.2 in Hg max.	29.2in Hg Max.	Max. 140°F		✓	✓
OIL & LUBRICANTS	Diesel Fuel	Compliant with NFPA 30 & 30A	125 psi	125 psi			✓	✓
	Engine Oil		150 psi	150 psi	Ambient		✓	✓
	Heating Fuel Oil		125 psi	125 psi	-40°F to 180°F		✓	✓
	Hydraulic Fluid	Mineral Based	230 psi	200 psi	Ambient		✓	✓
	Transmission Fluid		230 psi	200 psi	Ambient		✓	✓

Please note that all systems are recommended to be labeled clearly with the gas or fluid that is being conveyed.

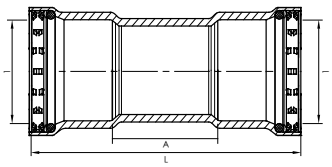
Additionally, please consult Merit's Engineering & Product Line Management Team for information on applications not listed and applications that are outside the temperature and pressure ranges listed above.

DIMENSIONAL DATA

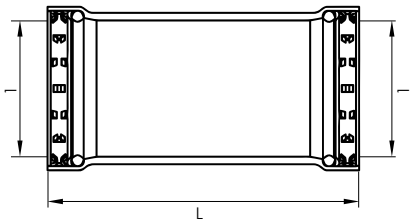
Coupling with Stop					P x P
Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90000	MB90001	MB90002	½"	0.79	2.83
MB90005	MB90006	MB90007	¾"	0.87	3.23
MB90010	MB90011	MB90012	1"	0.87	3.58
MB90015	MB90016	MB90017	1¼"	1.13	4.72
MB90020	MB90021	MB90022	1½"	1.18	4.88
MB90025	MB90026	MB90027	2"	1.26	5.12



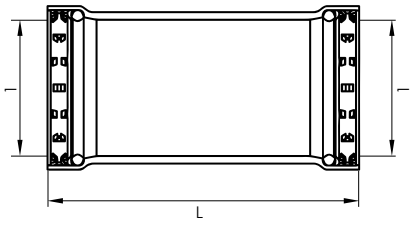
XL Coupling with Stop					P x P
Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90030	MB90031	MB90032	2½"	1.18	4.92
MB90035	MB90036	MB90037	3"	1.42	5.98
MB90040	MB90041	MB90042	4"	1.63	7.87



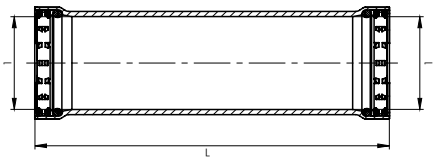
Coupling w/o Stop				P x P
Item Number			Nominal Size 1	L (in)
EPDM	HNBR	FKM		
MB90045	MB90046	MB90047	½"	2.83
MB90050	MB90051	MB90052	¾"	3.23
MB90055	MB90056	MB90057	1"	3.58
MB90060	MB90061	MB90062	1¼"	4.72
MB90065	MB90066	MB90067	1½"	4.88
MB90070	MB90071	MB90072	2"	5.12



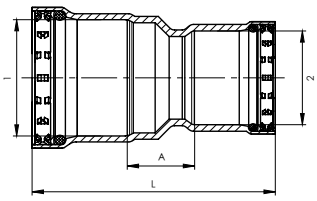
XL Coupling w/o Stop				P x P
Item Number			Nominal Size 1	L (in)
EPDM	HNBR	FKM		
MB90075	MB90076	MB90077	2½"	4.92
MB90080	MB90081	MB90082	3"	5.98
MB90085	MB90086	MB90087	4"	7.87



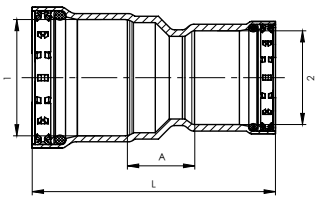
Extended Coupling w/o Stop				P x P
Item Number			Nominal Size 1	L (in)
EPDM	HNBR	FKM		
MB90090	MB90091	MB90092	½"	3.82
MB90095	MB90096	MB90097	¾"	4.00
MB90100	MB90101	MB90102	1"	4.37
MB90105	MB90106	MB90107	1¼"	5.31
MB90110	MB90111	MB90112	1½"	5.43
MB90115	MB90116	MB90117	2"	5.63



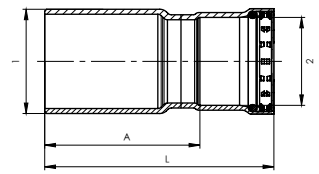
Reducing Coupling						P x P
Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB90120	MB90121	MB90122	¾"	½"	0.83	3.03
MB90125	MB90126	MB90127	1"	½"	0.96	3.35
MB90130	MB90131	MB90132	1"	¾"	0.94	3.48
MB90135	MB90136	MB90058	1¼"	¾"	1.32	4.29
MB90140	MB90141	MB90048	1¼"	1"	1.04	4.19
MB90137	MB90139	MB90049	1½"	¾"	1.54	4.57
MB90142	MB90143	MB90144	1½"	1"	1.22	4.43
MB90145	MB90146	MB90152	1½"	1¼"	1.07	4.72
MB90147	MB90148	MB90153	2"	1"	1.56	4.84
MB90150	MB90151	MB90154	2"	1¼"	1.59	5.31
MB90155	MB90156	MB90157	2"	1½"	1.50	5.28



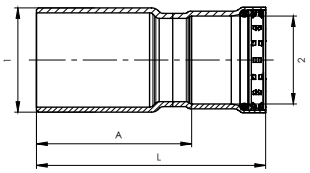
XL Reducing Coupling						P x P
Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB36000	MB36002	MB36001	2½"	1"	2.26	5.49
MB36003	MB36005	MB36004	2½"	1¼"	2.16	5.83
MB36006	MB36008	MB36007	2½"	1½"	2.01	5.73
MB36009	MB36011	MB36010	2½"	2"	1.52	5.31
MB36012	MB36014	MB36013	3"	1¼"	2.73	6.83
MB36015	MB36017	MB36016	3"	1½"	2.60	6.75
MB36018	MB36020	MB36019	3"	2"	2.13	6.36
MB36021	MB36023	MB36022	3"	2½"	1.61	5.79
MB36024	MB36026	MB36025	4"	1½"	3.58	8.56
MB36027	MB36029	MB36028	4"	2"	3.09	8.15
MB36030	MB36032	MB36031	4"	2½"	2.60	7.60
MB36033	MB36035	MB36034	4"	3"	2.32	7.76



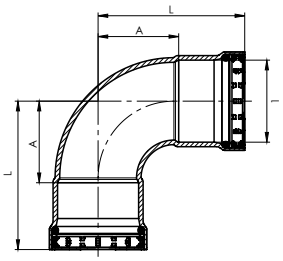
Bushing Reducer						FTG x P
Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB90160	MB90161	MB90162	¾"	½"	1.99	3.01
MB90165	MB90166	MB90167	1"	½"	2.36	3.39
MB90170	MB90171	MB90174	1"	¾"	2.26	3.44
MB90172	MB90173	MB90177	1¼"	¾	2.91	4.09
MB90175	MB90176	MB90178	1¼"	1"	2.74	4.09
MB90180	MB90181	MB90182	1½"	¾"	3.27	4.45
MB90185	MB90186	MB90187	1½"	1"	2.91	4.27
MB90190	MB90191	MB90192	1½"	1¼"	2.93	4.72
MB90195	MB90196	MB90197	2"	1"	3.37	4.72
MB90200	MB90201	MB90202	2"	1¼"	3.38	5.18
MB90205	MB90206	MB90207	2"	1½"	3.31	5.16



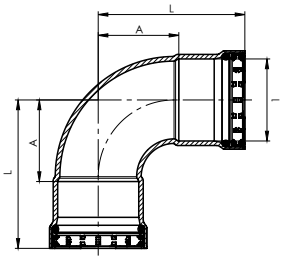
XL Bushing Reducer						FTG x P
Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB90210	MB90211	MB90212	2½"	1"	3.46	4.82
MB90215	MB90216	MB90217	2½"	1¼"	3.40	5.20
MB90220	MB90221	MB90222	2½"	1½"	3.33	5.18
MB90225	MB90226	MB90227	2½"	2"	3.15	5.08
MB90230	MB90231	MB90232	3"	1¼"	4.15	5.94
MB90235	MB90236	MB90237	3"	1½"	4.09	5.94
MB90240	MB90241	MB90242	3"	2"	4.29	6.22
MB90245	MB90246	MB90247	3"	2½"	3.84	5.71
MB90250	MB90251	MB90252	4"	1½"	5.59	7.44
MB90255	MB90256	MB90257	4"	2"	5.39	7.36
MB90260	MB90261	MB90262	4"	2½"	5.16	7.05
MB90265	MB90266	MB90267	4"	3"	5.06	7.36



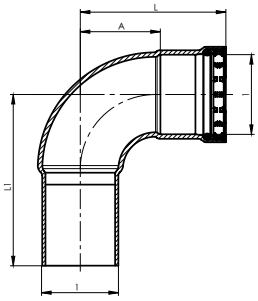
90° Elbow					P x P
Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90450	MB90451	MB90452	½"	1.56	2.58
MB90455	MB90456	MB90457	¾"	1.83	3.01
MB90460	MB90461	MB90462	1"	2.20	3.56
MB90465	MB90466	MB90467	1¼"	2.67	4.47
MB90470	MB90471	MB90472	1½"	2.93	4.78
MB90475	MB90476	MB90477	2"	3.66	5.59



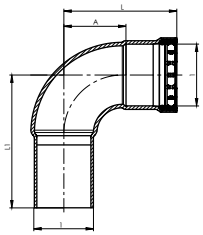
XL 90° Elbow					P x P
Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90480	MB90481	MB90482	2½"	4.09	5.98
MB90485	MB90486	MB90487	3"	4.80	7.09
MB90490	MB90491	MB90492	4"	6.10	9.25



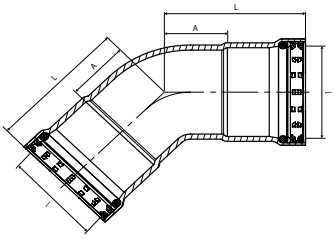
90° Street Elbow						FTG x Press
Item Number			Nominal Size 1	A (in)	L (in)	L1 (in)
EPDM	HNBR	FKM				
MB90495	MB90496	MB90497	½"	1.56	2.58	2.87
MB90500	MB90501	MB90502	¾"	1.83	3.01	3.27
MB90505	MB90506	MB90507	1"	2.20	3.56	3.86
MB90510	MB90511	MB90512	1¼"	2.67	4.47	4.61
MB90515	MB90516	MB90517	1½"	2.93	4.78	5.12
MB90520	MB90521	MB90522	2"	3.66	5.59	6.08



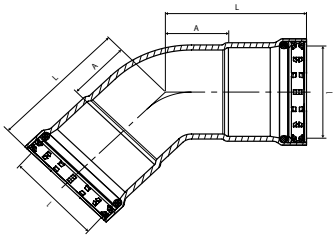
XL 90° Street Elbow			FTG x Press			
Item Number			Nominal Size 1	A (in)	L (in)	L1 (in)
EPDM	HNBR	FKM				
MB90525	MB90526	MB90527	2½"	4.09	5.98	5.98
MB90530	MB90531	MB90532	3"	4.80	7.09	6.97
MB90535	MB90536	MB90537	4"	6.10	9.25	9.06



45° Elbow			P x P		
Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90540	MB90541	MB90542	½"	0.87	1.89
MB90545	MB90546	MB90547	¾"	1.00	2.19
MB90550	MB90551	MB90552	1"	1.16	2.52
MB90555	MB90556	MB90557	1¼"	1.43	3.23
MB90560	MB90561	MB90562	1½"	1.54	3.41
MB90565	MB90566	MB90567	2"	1.87	3.80

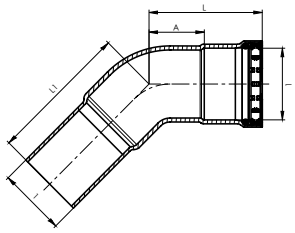


XL 45° Elbow			P x P		
Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90570	MB90571	MB90572	2½"	2.05	3.92
MB90575	MB90576	MB90577	3"	2.40	4.69
MB90580	MB90581	MB90582	4"	2.99	6.14



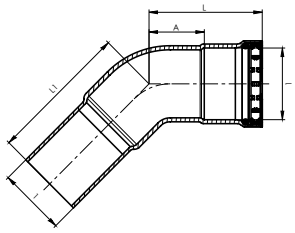
45° Street Elbow — FTG x P

Item Number			Nominal Size 1	A (in)	L (in)	L1 (in)
EPDM	HNBR	FKM				
MB90585	MB90586	MB90587	½"	0.87	1.89	2.17
MB90590	MB90591	MB90592	¾"	1.00	2.19	2.42
MB90595	MB90596	MB90597	1"	1.16	2.52	3.07
MB90600	MB90601	MB90602	1¼"	1.43	3.23	3.43
MB90605	MB90606	MB90607	1½"	1.54	3.41	3.74
MB90610	MB90611	MB90612	2"	1.87	3.80	3.94



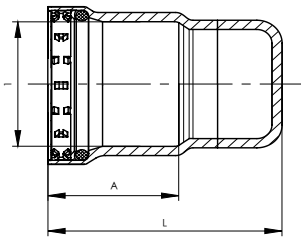
XL 45° Street Elbow — FTG x P

Item Number			Nominal Size 1	A (in)	L (in)	L1 (in)
EPDM	HNBR	FKM				
MB90615	MB90616	MB90617	2½"	2.05	3.92	4.23
MB90620	MB90621	MB90622	3"	2.40	4.69	4.57
MB90625	MB90626	MB90627	4"	2.99	6.14	5.94



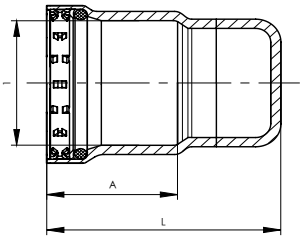
Cap — P

Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90630	MB90631	MB90632	½"	1.02	1.81
MB90635	MB90636	MB90637	¾"	1.18	2.01
MB90640	MB90641	MB90642	1"	1.36	2.19
MB90645	MB90646	MB90647	1¼"	1.80	2.83
MB90650	MB90651	MB90652	1½"	1.85	2.91
MB90655	MB90656	MB90657	2"	1.93	3.01



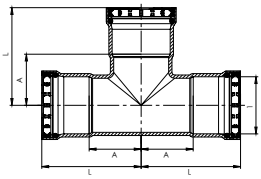
XL Cap — P

Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90660	MB90661	MB90662	2½"	1.87	3.60
MB90665	MB90666	MB90667	3"	2.30	4.21
MB90670	MB90671	MB90672	4"	3.13	5.39




Equal Tee — P x P x P

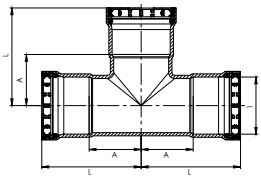
Item Number			Nominal Size 1	A (in)	A1 (in)	L (in)	L1 (in)
EPDM	HNBR	FKM					
MB90270	MB90271	MB90272	½"	0.89	0.89	1.91	1.91
MB90275	MB90276	MB90277	¾"	1.02	1.02	2.20	2.20
MB90280	MB90281	MB90282	1"	1.18	1.18	2.54	2.54
MB90285	MB90286	MB90287	1¼"	1.49	1.48	3.29	3.29
MB90290	MB90291	MB90292	1½"	1.61	1.61	3.46	3.46
MB90295	MB90296	MB90297	2"	1.93	1.93	3.86	3.86





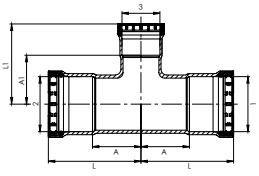
XL Equal Tee — P x P x P

Item Number			Nominal Size 1	A (in)	A1 (in)	L (in)	L1 (in)
EPDM	HNBR	FKM					
MB90395	MB90396	MB90397	2½"	2.03	2.03	3.90	3.90
MB90420	MB90421	MB90422	3"	2.44	2.46	4.74	4.74
MB90445	MB90446	MB90447	4"	3.05	3.07	6.18	6.18



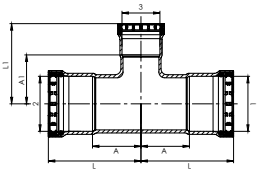
Reducing Tee — P x P x P

Item Number			Nominal Size			A (in)	A1 (in)	L (in)	L1 (in)
EPDM	HNBR	FKM	Size 1	Size 2	Size 3				
MB90300	MB90301	MB90302	¾"	¾"	½"	0.98	0.98	2.20	2.01
MB90305	MB90306	MB90307	1"	1"	½"	1.14	1.14	2.54	2.17
MB90310	MB90311	MB90312	1"	1"	¾"	1.18	1.18	2.54	2.36
MB90315	MB90316	MB90317	1¼"	1¼"	½"	1.49	1.32	3.29	2.34
MB90320	MB90321	MB90322	1¼"	1¼"	¾"	1.49	1.36	3.29	2.54
MB90325	MB90326	MB90327	1¼"	1¼"	1"	1.49	1.36	3.29	2.72
MB90330	MB90331	MB90332	1½"	1½"	½"	1.61	1.42	3.46	2.44
MB90335	MB90336	MB90337	1½"	1½"	¾"	1.61	1.46	3.46	2.64
MB90340	MB90341	MB90342	1½"	1½"	1"	1.61	1.46	3.46	2.81
MB90345	MB90346	MB90347	1½"	1½"	1¼"	1.61	1.59	3.46	3.39
MB90350	MB90351	MB90352	2"	2"	½"	1.93	1.71	3.86	2.74
MB90355	MB90356	MB90357	2"	2"	¾"	1.93	1.75	3.86	2.93
MB90360	MB90361	MB90362	2"	2"	1"	1.93	1.75	3.86	3.11
MB90365	MB90366	MB90367	2"	2"	1¼"	1.93	1.89	3.86	3.68
MB90370	MB90371	MB90372	2"	2"	1½"	1.93	1.91	3.86	3.76

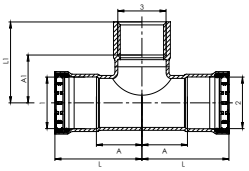


XL Reducing Tee — P x P x P

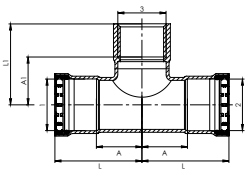
Item Number			Nominal Size			A (in)	A1 (in)	L (in)	L1 (in)
EPDM	HNBR	FKM	Size 1	Size 2	Size 3				
MB90375	MB90376	MB90377	2½"	2½"	1"	1.97	1.97	3.90	3.33
MB90380	MB90381	MB90382	2½"	2½"	1¼"	2.11	2.11	3.90	3.90
MB90385	MB90386	MB90387	2½"	2½"	1½"	2.13	2.13	3.90	3.98
MB90390	MB90391	MB90392	2½"	2½"	2"	2.13	2.13	3.90	4.07
MB90400	MB90401	MB90402	3"	3"	1¼"	2.28	2.28	4.74	4.15
MB90405	MB90406	MB90407	3"	3"	1½"	2.38	2.38	4.74	4.23
MB90410	MB90411	MB90412	3"	3"	2"	2.40	2.40	4.74	4.33
MB90415	MB90416	MB90417	3"	3"	2½"	2.28	2.28	4.74	4.15
MB90425	MB90426	MB90427	4"	4"	1½"	3.05	2.87	6.18	4.72
MB90430	MB90431	MB90432	4"	4"	2"	3.05	2.89	6.18	4.82
MB90435	MB90436	MB90437	4"	4"	2½"	3.05	2.78	6.18	4.65
MB90440	MB90441	MB90442	4"	4"	3"	3.05	2.95	6.18	5.24



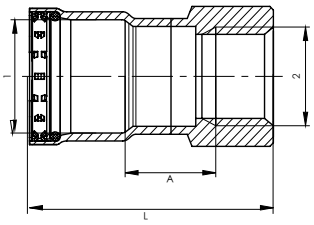
Reducing Tee (P x FPT)										P x P x FPT
Item Number			Nominal Size			A (in)	A1 (in)	L (in)	L1 (in)	
EPDM	HNBR	FKM	Size 1	Size 2	Size 3					
MB90840	MB90841	MB90842	¾"	¾"	½"	1.02	1.18	2.20	1.85	
MB90843	MB90844	MB90845	¾"	¾"	¾"	1.02	1.18	2.20	1.85	
MB90846	MB90847	MB90848	1"	1"	½"	1.18	1.34	2.54	2.01	
MB90849	MB90850	MB90851	1"	1"	¾"	1.18	1.34	2.54	2.01	
MB90852	MB90853	MB90854	1¼"	1¼"	½"	1.48	1.52	3.29	2.19	
MB90855	MB90856	MB90857	1¼"	1¼"	¾"	1.48	1.52	3.29	2.19	
MB90858	MB90859	MB90860	1¼"	1¼"	1"	1.48	1.56	3.29	2.34	
MB90861	MB90862	MB90863	1½"	1½"	½"	1.61	1.61	3.46	2.28	
MB90864	MB90865	MB90866	1½"	1½"	¾"	1.61	1.61	3.46	2.28	
MB90867	MB90868	MB90869	1½"	1½"	1"	1.61	1.65	3.46	2.44	
MB90870	MB90871	MB90872	1½"	1½"	1¼"	1.61	1.57	3.46	2.54	
MB90873	MB90874	MB90875	2"	2"	½"	1.93	1.91	3.86	2.58	
MB90876	MB90877	MB90878	2"	2"	¾"	1.93	1.91	3.86	2.58	
MB90879	MB90880	MB90881	2"	2"	1"	1.93	1.95	3.86	2.74	
MB90882	MB90883	MB90884	2"	2"	1¼"	1.93	1.87	3.86	2.83	
MB90885	MB90886	MB90887	2"	2"	1½"	1.93	1.95	3.86	2.93	



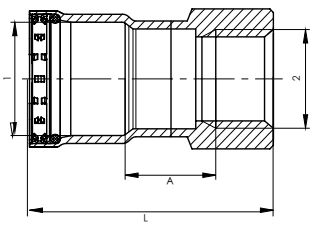
XL Reducing Tee (P x FPT)										P x P x FPT
Item Number			Nominal Size			A (in)	A1 (in)	L (in)	L1 (in)	
EPDM	HNBR	FKM	Size 1	Size 2	Size 3					
MB90888	MB90889	MB90890	2½"	2½"	¾"	1.28	2.13	3.15	2.80	
MB36036	MB36038	MB36037	2½"	2½"	1"	1.28	2.17	3.15	2.95	
MB90891	MB90892	MB90893	3"	3"	¾"	1.44	2.38	3.74	3.05	
MB36039	MB36041	MB36040	3"	3"	1"	1.44	2.42	3.74	3.21	
MB90894	MB90895	MB90896	4"	4"	¾"	1.59	2.87	4.72	3.54	
MB36042	MB36044	MB36043	4"	4"	1"	1.59	2.91	4.72	3.70	



Female Adapter						P x FPT
Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB90720	MB90721	MB90722	½"	½"	0.83	2.52
MB90725	MB90726	MB90737	¾"	½"	0.98	2.83
MB90730	MB90731	MB90727	¾"	¾"	0.87	2.72
MB90735	MB90736	MB90747	1"	½"	1.46	3.48
MB90740	MB90741	MB90738	1"	¾"	1.08	3.11
MB90745	MB90746	MB90742	1"	1"	0.91	3.05
MB90750	MB90751	MB90767	1¼"	½"	1.67	4.13
MB90755	MB90756	MB90752	1¼"	¾"	1.67	4.13
MB90760	MB90761	MB90757	1¼"	1"	1.16	3.76
MB90765	MB90766	MB90762	1¼"	1¼"	1.06	3.72
MB90770	MB90771	MB90792	1½"	½"	1.69	4.21
MB90775	MB90776	MB90772	1½"	¾"	1.69	4.21
MB90780	MB90781	MB90777	1½"	1"	1.73	4.37
MB90785	MB90786	MB90782	1½"	1¼"	1.18	3.90
MB90790	MB90791	MB90787	1½"	1½"	1.06	3.90
MB90795	MB90796	MB90822	2"	½"	1.71	4.31
MB90800	MB90801	MB90797	2"	¾"	1.71	4.31
MB90805	MB90806	MB90802	2"	1"	1.75	4.47
MB90810	MB90811	MB90807	2"	1¼"	1.77	4.57
MB90815	MB90816	MB90812	2"	1½"	1.46	4.37
MB90820	MB90821	MB90817	2"	2"	1.20	4.15

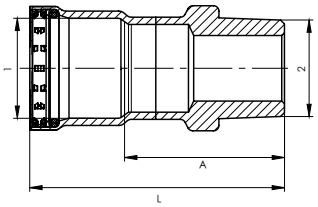


XL Female Adapter						P x FPT
Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB90825	MB90826	MB90827	2½"	2½"	1.06	4.00
MB90830	MB90831	MB90832	3"	3"	1.20	4.65
MB90835	MB90836	MB90837	4"	4"	1.32	5.71



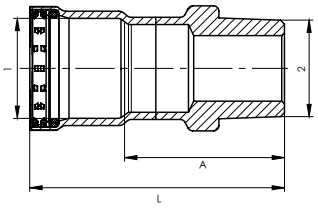
Male Adapter — P x MPT

Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB90675	MB90676	MB90677	½"	½"	1.65	2.68
MB90680	MB90681	MB90682	¾"	¾"	1.69	2.87
MB90685	MB90686	MB90687	1"	1"	1.73	3.09
MB90690	MB90691	MB90692	1¼"	1¼"	2.06	3.86
MB90695	MB90696	MB90697	1½"	1½"	2.24	4.09
MB90700	MB90701	MB90702	2"	2"	2.40	4.33

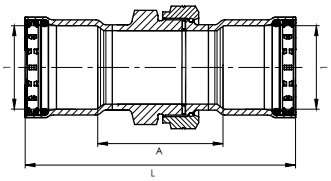
XL Male Adapter — P x MPT

Item Number			Nominal Size		A (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2		
MB90705	MB90706	MB90707	2½"	2½"	2.66	4.53
MB90710	MB90711	MB90712	3"	3"	2.93	5.24
MB90715	MB90716	MB90717	4"	4"	3.13	6.26



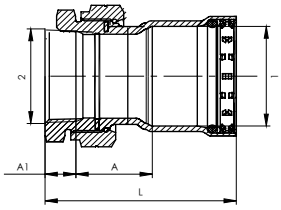
Union — P x P

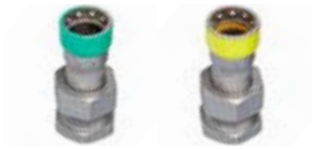
Item Number			Nominal Size 1	A (in)	L (in)
EPDM	HNBR	FKM			
MB90897	MB90919	MB90920	½"	2.83	4.88
MB90900	MB90922	MB90923	¾"	3.19	5.55
MB90903	MB90925	MB90926	1"	3.50	6.22
MB90909	MB90928	MB90929	1¼"	4.08	7.68
MB90912	MB90931	MB90932	1½"	4.13	7.83
MB90915	MB90934	MB90935	2"	4.92	8.78

Female Union — P x FPT

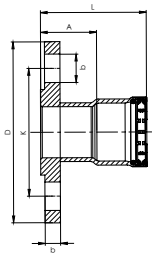
Item Number			Nominal Size		A (in)	A1 (in)	L (in)
EPDM	HNBR	FKM	Size 1	Size 2			
MB90936	MB90955	MB90956	½"	½"	1.50	0.71	3.23
MB90939	MB90958	MB90959	¾"	¾"	1.63	0.81	3.62
MB90942	MB90961	MB90962	1"	1"	1.79	0.87	4.02
MB90945	MB90964	MB90965	1¼"	1¼"	2.06	1.06	4.92
MB90948	MB90967	MB90968	1½"	1½"	2.09	1.06	5.00
MB90951	MB90970	MB90971	2"	2"	2.68	1.18	5.79





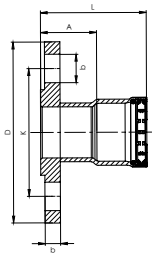
Flange Adapter — P x Flange

Item Number			Nominal Size 1	A (in)	L (in)	b (in)	K (in)	D (in)	d (in)
EPDM	HNBR	FKM							
MB90972	MB90973	MB90974	½"	1.23	2.25	0.46	2.36	3.54	0.63
MB90975	MB90976	MB90977	¾"	1.43	2.61	0.52	2.76	3.94	0.63
MB90978	MB90979	MB90980	1"	1.60	2.96	0.58	3.11	4.33	0.63
MB90981	MB90982	MB90983	1¼"	1.08	2.88	0.64	3.50	4.53	0.63
MB90984	MB90985	MB90986	1½"	1.17	3.02	0.70	3.86	4.92	0.63
MB90987	MB90988	MB90989	2"	1.26	3.19	0.77	4.76	5.91	0.75



XL Flange Adapter — P x Flange

Item Number			Nominal Size 1	A (in)	L (in)	b (in)	K (in)	D (in)	d (in)
EPDM	HNBR	FKM							
MB90990	MB90991	MB90992	2½"	1.24	3.12	0.81	5.51	7.01	0.75
MB90993	MB90994	MB90995	3"	1.50	3.78	0.88	6.00	7.48	0.75
MB90996	MB90997	MB90998	4"	1.61	4.72	0.88	7.50	9.02	0.75



INSTALLATION INSTRUCTIONS

Small Diameter (SD)

WARNING: CarbonPress® fittings must be installed in accordance with this section. Always ensure that the pressing tool and its jaws are appropriate for the schedule of pipe and size of fitting. Always refer to the pressing tool manufacturer's instructions for operation and maintenance prior to use with **CarbonPress®** fittings. Always wear PPE such as a hardhat, gloves, and safety glasses when making press connections. Failure to follow these instructions may void the warranty and result in extensive property damage, serious injury or death.

1. Cut pipe

After selecting the correct size of pipe for the job, ensure that it is clean and free from imperfections. Once inspected, cut the pipe squarely to length using a pipe cutter, fine-toothed steel saw or an electrical mechanical saw to avoid jagged edges or scratching the pipe's surface. When cutting pipe, it must be cut all the way through. Never partially cut the pipe and break it off as it could cause leakage.

2. Deburr pipe

After the pipe is cut to length, deburr the inside and outside with a file, hand deburrer and an electrical pipe deburrer to remove debris and prevent damage to the sealing element. Once the pipe has been deburred, lightly clean the end of the pipe with a piece of sand cloth or similar material to ensure a smooth, and oil-free surface.

3. Check press fittings

In addition to checking the pipe for any imperfections, check the fitting to ensure that it is free of debris, burrs, etc., and that the sealing element is present and appropriate for the application. If the sealing element is lifted from its bead pocket, gently push it back into place being sure to not transfer dirt or debris to the sealing surface. When checking the seal for the correct fit, do not use oil and lubricants.

4. Measure & mark pipe

With a permanent marker, mark the proper insertion depth at the appropriate distance from the end of the pipe as indicated in the **CarbonPress®** Insertion Depth Chart.

CarbonPress® Insertion Depth Chart					
Nominal Pipe Size					
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Insertion Depth					
1.06"	1.19"	1.38"	1.81"	1.88"	2"

NOTE: *improper insertion depth may result in an improper seal.*

5. Insert pipe into fitting

Carefully insert the pipe into the fitting to the prescribed insertion depth. The insertion depth mark must be visible after the pipe is inserted in to the fitting to identify any

movement that may occur before or after the pressing. In the instance that a fitting does not have a stop, the fitting must be centered between the pipe ends, however, the minimum pipe insertion depth must be maintained and marked.

NOTE: *if the pipe is roughly or carelessly inserted into the press fitting, it may cause damage to the sealing element.*

6. Verify tool & jaw
Verify that the tool and jaw being used for the application are the appropriate size for the fitting using an approved press tool from the **CarbonPress® Tooling Table**.

NOTE: *failure to follow these instructions may void the warranty.*

7. Position tool
Ensure jaw pressing surfaces are free from debris. Once inspected, insert the approved jaw into the pressing tool and push in, hold the pin until it locks in placed.

8. Press connection
To begin the pressing process, position the tool jaws on the raised portion at the fitting end(s) then squeeze until the trigger has engaged the sealing element or VIPR® (Visual Indicator Press Ring®). The press tool will complete a cycle then stop. Do no release the trigger until the pressing action is complete.

Leak testing
Unpressed connections can be identified prior to pressurization by the presence of the VIPR® on the bead outer diameter. The **CarbonPress®** sealing element is designed to physically leak while unpressed when the system is pressurized with air (45 psi max) or water (85 psi max) or per local codes, giving redundant assurance of installation integrity.

An incomplete press may reduce the pressure retention capabilities of the joint and lead to subsequent system leakage.

9. Remove tool & Inspect press connection
Once the tool has completed a full pressing cycle, release the trigger, and remove the jaw from the fitting. Once the jaw is removed from the fitting, the VIPR® will break off, indicating a complete press.

NOTE: *if the VIPR® does not instantly break off, simply remove by hand.*

INSTALLATION INSTRUCTIONS

Large Diameter (XL)

WARNING: CarbonPress® fittings must be installed in accordance with this section. Always ensure that the pressing tool and its jaws are appropriate for the schedule of pipe and size of fitting. Always refer to the pressing tool manufacturer's instructions for operation and maintenance prior to use with **CarbonPress®** fittings. Always wear PPE such as a hardhat, gloves, and safety glasses when making press connections. Failure to follow these instructions may void the warranty and result in extensive property damage, serious injury or death.

1. Cut pipe

After selecting the correct size of pipe for the job, ensure that it is clean and free from imperfections. Once inspected, cut the pipe squarely to length using a pipe cutter, fine-toothed steel saw or an electrical mechanical saw to avoid jagged edges or scratching the pipe's surface. When cutting pipe, it must be cut all the way through. Never partially cut the pipe and break it off as it could cause leakage.

2. Deburr pipe

After the pipe is cut to length, deburr the inside and outside with a file, hand deburrer and an electrical pipe deburrer to remove debris and prevent damage to the sealing element. Once the pipe has been deburred, lightly clean the end of the pipe with a piece of sand cloth or similar material to ensure a smooth, and oil-free surface.

3. Check press fittings

In addition to checking the pipe for any imperfections, check the fitting to ensure that it is free of debris, burrs, etc., and that the sealing element is present and appropriate for the application. If the sealing element is lifted from its bead pocket, gently push it back into place being sure to not transfer dirt or debris to the sealing surface. When checking the seal for the correct fit, do not use oil and lubricants.

4. Measure & mark pipe

With a permanent marker, mark the proper insertion depth at the appropriate distance from the end of the pipe as indicated in the **CarbonPress®** Insertion Depth Chart.

CarbonPress® Insertion Depth Chart		
Nominal Pipe Size		
2-1/5"	3"	4"
Insertion Depth Size		
1.89"	2.32"	3.15"

NOTE: *improper insertion depth may result in an improper seal.*

5. Insert pipe into fitting

Carefully insert the pipe into the fitting to the prescribed insertion depth. The insertion depth mark must be visible after the pipe is inserted in to the fitting to identify any movement that may occur before or after the pressing. In the instance that a fitting does not have a stop, the fitting must be centered between the pipe ends, however, the minimum pipe insertion depth must be maintained and marked.

NOTE: *if the pipe is roughly or carelessly inserted into the press fitting, it may cause damage to the sealing element.*

6. Verify tool, ring & jaw
Verify that the tool, ring and jaw being used for the application are the appropriate size for the fitting using an approved press tool from the **CarbonPress® Tooling Table**.

NOTE: *failure to follow these instructions may void the warranty.*

7. Position tool
Ensure jaw pressing surfaces are free from debris. Once inspected, insert the approved jaw into the pressing tool and push in, hold the pin until it locks in placed. Open the jaw on the press tool and close on the appropriate location on the ring. Next, open the ring and visually check the insertion depth using the mark on the tubing. Place the press ring onto the fitting, being sure to align it with the raised, grip ring, portion of the fitting.

8. Press connection
To begin the pressing process, position the tool rings on the raised portion at the fitting end(s) then squeeze until the trigger has engaged the sealing element. The press tool will complete a cycle then stop. Do no release the trigger until the pressing action is complete. An incomplete press may reduce the pressure retention capabilities of the joint and lead to subsequent system leakage.

9. Remove tool & Inspect press connection
Once the tool has completed a full pressing cycle, release the trigger, and remove the jaw from the fitting. Once the jaw is removed from the fitting, the VIPR® will break off, indicating a complete press.

NOTE: *if the VIPR® does not instantly break off, simply remove by hand.*

Leak testing
Unpressed connections can be identified prior to pressurization by the presence of the VIPR® on the bead outer diameter. The **CarbonPress®** sealing element is designed to physically leak while unpressed when the system is pressurized with air (45 psi max) or water (85 psi max) or per local codes, giving redundant assurance of installation integrity.

LIMITED WARRANTY

CarbonPress® By Merit Brass Co. CopperPress® By Merit Brass Co. StainlessPress® Isotubi-USA, By Merit Brass Co. MeritPress™ By Merit Brass Co.

LIMITED WARRANTY FOR COPPERPRESS® FITTINGS, COPPERPRESS® VALVES, CARBONPRESS® FITTINGS AND STAINLESSPRESS® FITTINGS AND STAINLESSPRESS® VALVES.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

THE LIMITED WARRANTY CAN ALSO BE FOUND ONLINE AT WWW.MERITBRASS.COM/WARRANTY-POLICY AND/OR IN THE DOCUMENTATION WE PROVIDE WITH THE APPLICABLE PRODUCT.

WE WARRANT THAT DURING THE WARRANTY PERIOD, THE PRODUCT WILL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP AS DESCRIBED IN OUR LITERATURE.

WE LIMIT THE DURATION AND REMEDIES OF ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

OUR RESPONSIBILITY FOR DEFECTIVE GOODS IS LIMITED TO REPAIR, OR REPLACEMENT AS DESCRIBED BELOW IN THIS WARRANTY STATEMENT.

Who may use this warranty?

Merit Brass Company located at One Merit Drive, PO Box 43127 Cleveland, OH 44143 ("we") extend this limited warranty only to the consumer who originally purchased the applicable product ("you"). It does not extend to any subsequent owner or other transferee of the product.

What does this warranty cover?

This limited warranty covers defects in materials and workmanship of the: (i) CopperPress® fittings, (ii) the press valves, (iii) the Carbonpress® fittings, and (iv) the Stainlesspress® fittings exclusive of all marine applications and chemical compatibility must be verified via Merit's literature or confirmed by its Technical Department prior to installation (the "product") for the Warranty Period as defined below.

What does this warranty not cover?

This limited warranty does not cover any damage due to: (a) transportation; (b) storage; (c) improper use; (d) failure to follow the product instructions or to perform any preventive maintenance; (e) modifications; (f) unauthorized repair; (g) normal wear and tear; or (h) external causes such as accidents, abuse, or other actions or events beyond our reasonable control.

What is the period of coverage?

This limited warranty starts on the date of your purchase and lasts for: (i) fifty (50) years for **CopperPress®** fittings, (ii) fifteen (15) years for the **Carbonpress®** fittings and the **Stainlesspress®** fittings, and (iii) five (5) years for the press valves (collectively the **"Warranty Period"**). The Warranty Period is not extended if we repair or replace the product. We may change the availability of this limited warranty at our discretion, but any changes will not be retroactive.

What are your remedies under this warranty?

With respect to any defective product during the applicable Warranty Period, we will, in our sole discretion repair or replace such product (or the defective part) free of charge. We will also pay for shipping and handling fees to return the repaired or replacement product to you.

How do you obtain warranty service?

To obtain warranty service, you must call 1-800-726-9800 or email our Warranty Claims Department at returns@meritbrass.com during the applicable Warranty Period to obtain a Return Material Authorization ("RMA") number. No warranty service will be provided without an RMA number. Upon receipt of the RMA, and at your expense, products suspected of being defective shall be returned to Merit's Warranty Claims Department at One Merit Drive, Cleveland, OH 44143. Within about six weeks of receipt, Merit will determine the cause of failure and notify the purchaser of our findings.

Limitation of liability

THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES AND OUR ENTIRE LIABILITY FOR ANY BREACH OF THIS LIMITED WARRANTY. OUR LIABILITY SHALL UNDER NO CIRCUMSTANCES EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE DEFECTIVE PRODUCT, NOR SHALL WE UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT AND/OR WHETHER CAUSED BY WATER, MOLD, LOSS OF EQUIPMENT, PROPERTY, REVENUE OR COST OF CAPITAL.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

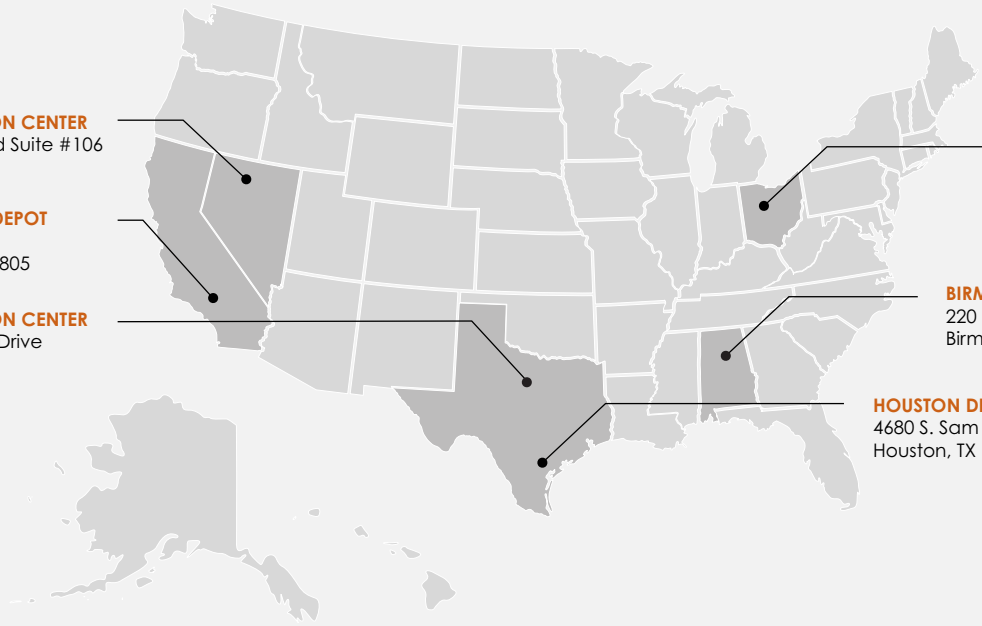
CarbonPress® By Merit Brass Co.

CopperPress® By Merit Brass Co.

StainlessPress® Isotubi-USA, By Merit Brass Co.

MeritPress™ By Merit Brass Co.

LOCATIONS



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