

STANDARD MALLEABLE PIPE FITTINGS  
CLASS 150

Ward Class 150 Malleable Iron Fittings are made with the most sophisticated metallurgical and processing controls available. Iron samples are continuously analyzed using spectroscopy to confirm the material quality. This sophisticated chemical analysis is complemented by rigorous quality control of incoming raw materials and iron processing. The final casting produced by this detailed attention to quality is a close-grained, high strength, non-porous iron.

Quality iron is the starting point for Ward fittings. From this iron, accurate threads are machined that comply with the precise standards developed by the American National Standards Institute (ANSI). The threads have an accurate form, thread length and straightness to allow them to easily engage threaded pipe. In addition, Ward fittings have a chamfered opening to allow faster and easier pipe engagement. This feature also protects the fitting threads from damage during handling.

All Ward black & galvanized Class 150 Malleable Iron Fittings having outlets ranging from 1/2" through 4" are air tested at 80 psig. This test is part of a constant program to maintain the highest quality fittings available.



## PRESSURE - TEMPERATURE RATINGS

TEMP F	PSIG
-20 TO 150	300
200	265
250	225
300	185
350	150
366	150

## GENERAL DIMENSIONS / IN INCHES

THESE DIMENSIONS APPLY TO ALL STANDARD MALLEABLE BANDED FITTINGS BOTH STRAIGHT AND REDUCING. LENGTH OF THREAD ALSO APPLIES TO PLAIN FITTINGS. FOR CENTER-TO-FACE DIMENSIONS. SEE FITTINGS TABLES.

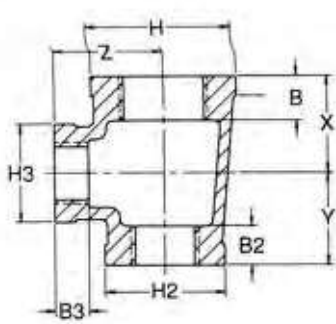
Pipe size	O.D. of Band (min)	Thread Length (min)
1/8"	0.69	0.25
1/4"	0.84	0.32
3/8"	1.01	0.36
1/2"	1.20	0.43
3/4"	1.46	0.50
1"	1.77	0.58
1 1/4"	2.15	0.67
1 1/2"	2.43	0.70
2"	2.96	0.75
2 1/2"	3.59	0.92
3"	4.28	0.98
3 1/2"	4.84	1.03
4"	5.40	1.08

**Material:** ASTM A197  
**Dimensions:** ANSI/ASME B 16.3  
 ANSI/ASME B 1.20.1  
**Pressure Ratings:** ANSI/ASME B 16.3  
**Coatings:** ASTM A 153  
**Additional Specifications:** Federal Spec. WWP 521  
 UL, ULC AND FM, as applicable.



MALLEABLE IRON REDUCING TEES CLASS 150

FIGURE 52



NPS	Center to End X	Center to End Y	Center to End Z	Length of Thread B	Length of Thread B2	Length of Thread B3	Take Out	Take Out	Take Out	Outside Dia. of Band H (min)	Outside Dia. of Band H2 (min)	Outside Dia. of Band H3 (min)
3/8 x 3/8 x 1/2"	1.030	1.030	1.040	0.360	0.360	0.430	0.655	0.655	0.540	1.010	1.010	1.200
1/2 x 1/4 x 1/2"	1.120	1.010	1.120	0.470	0.360	0.470	0.650	0.650	0.650	1.200	0.840	1.200
1/2 x 1/2 x 3/4"	1.220	1.220	1.200	0.430	0.430	0.500	0.720	0.720	0.638	1.200	1.200	1.460
1/2 x 1/2 x 3/8"	1.040	1.040	1.030	0.430	0.430	0.360	0.540	0.540	0.655	1.200	1.200	1.010
1/2 x 1/2 x 1/4"	0.970	0.970	0.980	0.430	0.430	0.320	0.470	0.470	0.605	1.200	1.200	0.840
1/2 x 3/8 x 1/2"	1.120	1.030	1.120	0.430	0.360	0.430	0.620	0.655	0.620	1.200	1.010	1.197
1/2 x 3/8 x 3/8"	1.040	0.950	1.030	0.430	0.360	0.360	0.540	0.575	0.655	1.200	1.010	1.010
3/4 x 3/4 x 1"	1.450	1.450	1.370	0.500	0.500	0.580	0.888	0.888	0.808	1.460	1.460	1.770
3/4 x 3/4 x 1/2"	1.200	1.200	1.220	0.500	0.500	0.430	0.638	0.638	0.720	1.460	1.460	1.200
3/4 X 3/4 X 3/8"	1.120	1.120	1.130	0.500	0.500	0.360	0.558	0.558	0.755	1.460	1.460	1.010
3/4 X 3/4 X 1/4"	1.050	1.050	1.080	0.540	0.540	0.360	0.510	0.510	0.720	1.460	1.460	0.840
3/4 X 1/2 X 3/4"	1.310	1.220	1.310	0.500	0.430	0.500	0.748	0.720	0.748	1.460	1.200	1.460
3/4 X 1/2 X 1/2"	1.200	1.120	1.220	0.500	0.430	0.430	0.638	0.620	0.720	1.460	1.200	1.200
3/4 X 3/8 X 3/4"	1.310	1.130	1.130	0.500	0.360	0.500	0.935	0.755	0.568	1.460	1.010	1.460
1 X 1 X 1 1/4"	1.670	1.670	1.580	0.580	0.580	0.670	0.983	0.983	0.893	1.770	1.770	2.150
1 X 1 X 3/4"	1.370	1.370	1.450	0.580	0.580	0.500	0.683	0.683	0.888	1.770	1.770	1.460
1 X 1 X 1/2"	1.260	1.260	1.360	0.580	0.580	0.430	0.573	0.573	0.860	1.770	1.770	1.200
1 X 1 X 3/8"	1.180	1.180	1.270	0.580	0.580	0.360	0.493	0.493	0.895	1.770	1.770	1.010
1 X 3/4 X 1"	1.500	1.450	1.500	0.580	0.500	0.580	0.813	0.888	0.813	1.770	1.460	1.770
1 X 3/4 X 3/4"	1.370	1.310	1.450	0.580	0.500	0.500	0.683	0.748	0.888	1.770	1.460	1.460
1 X 3/4 X 1/2"	1.260	1.200	1.360	0.580	0.500	0.430	0.573	0.638	0.860	1.770	1.460	1.200
1 X 1/2 X 1"	1.500	1.360	1.500	0.580	0.430	0.580	0.813	0.860	0.813	1.770	1.200	1.770
1 X 1/2 X 3/4"	1.370	1.220	1.450	0.580	0.430	0.500	0.683	0.720	0.888	1.770	1.200	1.460
1 X 1/2 X 1/2"	1.260	1.120	1.360	0.580	0.430	0.430	0.573	0.620	0.860	1.770	1.200	1.200
1 X 1/4 X 1"	1.500	1.200	1.500	0.580	0.320	0.580	0.813	0.825	0.813	1.770	0.840	1.770
1 X 1/8 X 1"	1.500	1.100	1.500	0.580	0.250	0.580	0.813	0.850	0.813	1.770	0.690	1.770
1 1/4 X 1 1/4 X 1"	1.580	1.580	1.670	0.670	0.670	0.580	0.893	0.893	0.983	2.150	2.150	1.770
1 1/4 X 1 1/4 X 3/4"	1.450	1.450	1.620	0.670	0.670	0.500	0.763	0.763	1.058	2.150	2.150	1.460
1 1/4 X 1 1/4 X 1/2"	1.340	1.340	1.530	0.670	0.670	0.430	0.653	0.653	1.030	2.150	2.150	1.200
1 1/4 X 1 X 1 1/4"	1.750	1.670	1.750	0.670	0.580	0.670	1.063	0.983	1.063	2.150	1.770	2.150
1 1/4 X 1 X 1"	1.580	1.500	1.670	0.670	0.580	0.580	0.893	0.813	0.983	2.150	1.770	1.770
1 1/4 X 1 X 3/4"	1.450	1.370	1.620	0.670	0.580	0.500	0.763	0.683	1.058	2.150	1.770	1.460
1 1/4 x 3/4 x 1 1/4"	1.750	1.620	1.750	0.670	0.500	0.670	1.063	1.058	1.063	2.150	1.460	2.150

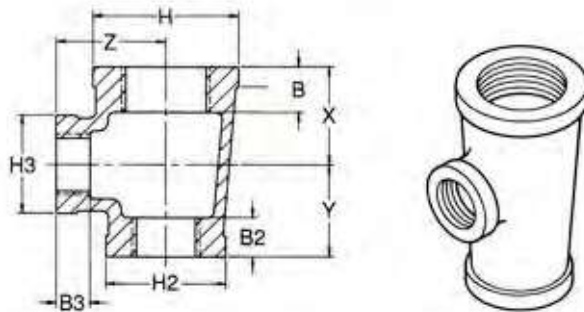
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# MALLEABLE IRON REDUCING TEES

CLASS 150/CONT.

FIGURE 52



NPS H denotes Heel Ell	Center to End X	Center to End Y	Center to End Z	Length of Thread B	Length of Thread B2	Length of Thread B3	Take Out	Take Out	Take Out	Outside Dia. of Band H (min)	Outside Dia. of Band H2 (min)	Outside Dia. of Band H3 (min)
1 1/4 x 3/4 x 1"	1.580	1.450	1.670	0.670	0.500	0.580	0.893	0.888	0.983	2.150	1.460	1.770
1 1/4 x 3/4 x 3/4"	1.450	1.310	1.620	0.670	0.500	0.500	0.763	0.748	1.058	2.150	1.460	1.460
1 1/4 x 1/2 x 1 1/4"	H 1.750	1.530	1.750	0.670	0.430	0.670	1.063	1.030	1.063	2.150	1.200	2.150
1 1/2 x 1 1/2 x 1 1/4"	1.820	1.820	1.880	0.700	0.700	0.670	1.133	1.133	1.193	2.430	2.430	2.150
1 1/2 x 1 1/2 x 1"	1.650	1.650	1.800	0.700	0.700	0.580	0.963	0.963	1.113	2.430	2.430	1.770
1 1/2 x 1 1/2 x 3/4"	1.520	1.520	1.750	0.700	0.700	0.500	0.833	0.833	1.188	2.430	2.430	1.460
1 1/2 x 1 1/2 x 1/2"	1.410	1.410	1.660	0.700	0.700	0.430	0.723	0.723	1.160	2.430	2.430	1.200
1 1/2 x 1 1/4 x 1 1/2"	1.940	1.880	1.940	0.700	0.670	0.700	1.253	1.193	1.253	2.430	2.150	2.430
1 1/2 x 1 1/4 x 1 1/4"	1.820	1.750	1.880	0.700	0.670	0.670	1.133	1.063	1.193	2.430	2.150	2.150
1 1/2 x 1 1/4 x 1"	1.650	1.580	1.800	0.700	0.670	0.580	0.963	0.893	1.113	2.430	2.150	1.770
1 1/2 x 1 1/4 x 3/4"	1.520	1.450	1.750	0.700	0.670	0.500	0.833	0.763	1.188	2.430	2.150	1.460
1 1/2 x 1 x 1 1/2"	1.940	1.800	1.940	0.700	0.580	0.700	1.253	1.113	1.253	2.430	1.770	2.430
1 1/2 x 1 x 1"	1.650	1.500	1.800	0.700	0.580	0.580	0.963	0.813	1.113	2.430	1.770	2.430
1 1/2 x 3/4 x 1 1/2"	H 1.940	1.750	1.940	0.700	0.500	0.700	1.253	1.188	1.253	2.430	1.460	2.430
1 1/2 x 3/4 x 3/4"	1.550	1.350	1.770	0.700	0.500	0.500	0.863	0.788	1.208	2.430	1.460	1.460
1 1/2 x 1/2 x 1 1/2"	H 1.940	1.660	1.940	0.700	0.430	0.700	1.253	1.160	1.253	2.430	1.200	2.430
2 x 2 x 1 1/2"	2.020	2.020	2.160	0.750	0.750	0.700	1.270	1.270	1.473	2.960	2.960	2.430
2 x 2 x 1 1/4"	1.900	1.900	2.100	0.750	0.750	0.670	1.150	1.150	1.413	2.960	2.960	2.150
2 x 2 x 1"	1.730	1.730	2.020	0.750	0.750	0.580	0.980	0.980	1.333	2.960	2.960	1.770
2 x 2 x 3/4"	1.600	1.600	1.970	0.750	0.750	0.500	0.850	0.850	1.408	2.960	2.960	1.460
2 x 2 x 1/2"	1.490	1.490	1.880	0.750	0.750	0.430	0.740	0.740	1.380	2.960	2.960	1.200
2 x 1 1/2 x 2"	2.250	2.160	2.250	0.750	0.700	0.750	1.500	1.473	1.500	2.960	2.430	2.960
2 x 1 1/2 x 1 1/2"	2.020	1.940	2.160	0.750	0.700	0.700	1.270	1.253	1.473	2.960	2.430	2.430
2 x 1 1/2 x 1 1/4"	1.900	1.820	2.100	0.750	0.700	0.670	1.150	1.133	1.413	2.960	2.430	2.150
2 x 1 1/2 x 1"	1.730	1.650	2.020	0.750	0.700	0.580	0.980	0.963	1.333	2.960	2.430	1.770
2 x 1 1/4 x 2"	2.250	2.100	2.250	0.750	0.670	0.750	1.500	1.413	1.500	2.960	2.150	2.960
2 x 1 1/4 x 1 1/4"	1.900	1.750	2.100	0.750	0.670	0.670	1.150	1.063	1.413	2.960	2.150	2.150
2 x 1 x 2"	H 2.250	2.020	2.250	0.750	0.580	0.750	1.500	1.333	1.500	2.960	1.770	2.960
2 x 1 x 1"	1.780	1.680	2.080	0.750	0.580	0.580	1.030	0.993	1.393	2.960	1.770	1.770
2 x 3/4 x 2"	2.250	1.970	2.250	0.750	0.500	0.750	1.500	1.408	1.500	2.960	1.460	2.960
2 x 1/2 x 2"	2.250	1.880	2.250	0.750	0.430	0.750	1.500	1.380	1.500	2.960	1.200	2.960
2 1/2 x 2 1/2 x 2"	2.390	2.390	2.600	0.920	0.920	0.750	1.453	1.453	1.850	3.590	3.590	2.960
3 x 3 x 2 1/2"	2.830	2.830	2.990	0.980	0.980	0.920	1.830	1.830	2.053	4.280	4.280	3.590
3 x 3 x 2"	2.520	2.520	2.890	0.980	0.980	0.750	1.520	1.520	2.140	4.280	4.280	2.960
3 x 3 x 1 1/2"	2.290	2.290	2.800	0.980	0.980	0.700	1.290	1.290	2.113	4.280	4.280	2.430
3 x 3 x 1 1/4"	2.170	2.170	2.740	0.980	0.980	0.670	1.170	1.170	2.053	4.280	4.280	2.150
3 x 3 x 1"	2.000	2.000	2.660	0.980	0.980	0.580	1.000	1.000	1.973	4.280	4.280	1.770
3 x 3 x 3/4"	1.870	1.870	2.610	1.020	1.020	0.540	0.850	0.850	2.070	4.280	4.280	1.460
3 x 2 x 2"	2.520	2.250	2.890	0.980	0.750	0.750	1.520	1.500	2.140	4.280	2.960	2.960