

X-Products

Dura-Bar offers a product with an expanded size range in gray and ductile iron continuous cast grades, and a larger size static cast ingot. Rounds are available as large as 29.50" dia. and rectangles/squares up to 28" (on the longest dimension).

GX is a pearlitic gray iron offered in a variety of small and large cross sections for non-typical size applications. GX benefits include wear resistance, noise and vibration damping and heat treat response. Conforms to ASTM A48 Class 40.

65-45-12X is an all-purpose grade of ductile iron with medium strength and ductility, making it a suitable alternative to low- medium carbon steels. The predominately ferritic matrix is appropriate for applications necessitating fatigue strength and ductility.

80-55-06X ductile iron is predominantly pearlitic, making it a good fit for applications where wear resistance and surface finish are required. The additional pearlite also makes it responsive to heat treating using conventional methods.

Each grade above meets its corresponding ASTM required mechanical properties.

Mechanical Properties:

Grade	Tensile Strength	Yield	Elongation	Brinell Hardness	Microstructure
GX	Varies by size *	n/a	n/a	190-260	Pearlitic
65-45-12X	65,000 psi	45,000 psi	12%	131-217	Ferritic
80-55-06X	80,000 psi	55,000 psi	6%	187-255	Pearlitic

* See **GX Class 40 Tensile Table**

New Size Offerings in Continuous Cast Bars:

Round Nominal Diameter*	GX	65-45-12X	80-55-06X
21.64" x 54"	✓	✓	
22.62" x 54"	✓	✓	
24.00" x 54"	✓	✓	
25.18" x 48"	✓	✓	✓
26.56" x 43"	✓	✓	✓

*Diameter x Length

Stock Allowance (add to nominal dia. inches) = 0.980"

Rectangle As-Cast Size	Grade	Machining Allowance per side (inches)	Max Finish Size
14" x 25.6" x 72" or 83"	GX**	0.450	13.10" x 24.70" x 72" or 83"
16" x 28" x 56"	GX**	0.450	15.10" x 27.10" x 56"
15.354" x 15.354" x 72"	GX**	0.300	14.754" x 14.754" x 72"
16.142" x 16.142" x 72"	GX**	0.370	15.402" x 15.402" x 72"
17.716" x 17.716" x 72"	GX**	0.370	16.976" x 16.976" x 72"
21" x 21" x 54"	GX**	0.500	20" x 20" x 54"
20" x 25.6" x 48"	65-45-12X	0.500	19.0" x 24.6" x 48"
21" x 21" x 54"	65-45-12X	0.500	20" x 20" x 54"
15.354" x 15.354" x 72"	65-45-12X	0.370	14.614" x 14.614" x 72"
16.142" x 16.142" x 72"	65-45-12X	0.450	15.242" x 15.242" x 72"
17.716" x 17.716" x 72"	65-45-12X	0.450	16.816" x 16.816" x 72"
18" x 28" x 50"	65-45-12X	0.500	17" x 27" x 50"
14.6" x 24.4" x 72"	80-55-06X	0.500	13.60" x 23.4" x 72"

** Stress Relieved

Note: Sizes are H x W x L. X Grades rectangle stock allowances are based on the width of the bar. Clean up stock must be considered when ordering.

Example: 20.0" x 25.60" maximum finish size is 19.0" x 24.6".

New Size Offerings in Static Cast Ingots:

Round Nominal Diameter*	GX	65-45-12X	80-55-06X
29.50" x 34"	✓	✓	✓

*Diameter x Length

Turned OD Tolerance +.080" / -.00" and Finish Size 0.250" below turned OD

Application Examples:

Foundry: pattern plates and core boxes

Machine Tool: slide ways and vises

GX Gray Iron Rectangles

As-Cast Size in Inches	Maximum Finish Size in Inches	As-Cast Weight per foot - lb	Bundle Quantity	Gray Iron GX As-Cast Est. lb/Bar
0.75 X 1.50	0.550 X 1.300	3.5	50	21.6
1.25 X 2.25	0.970 X 1.970	8.8	30	54.1
1.25 X 3.25	0.970 X 2.970	12.7	30	78.2
1.25 X 4.25	0.890 X 3.890	16.6	24	105.0
1.25 X 5.25	0.890 X 4.890	20.5	18	126.3
1.25 X 6.25	0.890 X 5.890	24.4	18	156.0
1.50 X 2.25	1.220 X 1.970	10.5	40	64.9
1.50 X 4.25	1.140 X 3.890	19.9	24	126.0
1.50 X 6.25	1.140 X 5.890	29.3	15	186.0
1.75 X 4.25	1.390 X 3.890	23.2	25	143.1
1.75 X 6.25	1.390 X 5.890	34.1	18	216.0
2.25 X 3.25	1.970 X 2.970	22.8	24	140.7
2.25 X 4.25	1.890 X 3.890	29.8	25	184.0
2.25 X 5.25	1.890 X 4.890	36.9	16	227.3
2.25 X 6.25	1.890 X 5.890	43.9	12	278.0
2.50 x 3.25	2.220 x 2.970	25.4	20	160.0
2.50 x 4.25	2.140 x 3.890	33.2	20	204.4
2.50 X 6.25	2.140 X 5.890	48.8	12	300.6
2.50 X 8.25	1.980 X 7.730	64.4	8	396.8

Note: All bars are 72" length

Squares

As-Cast Size in Inches	Maximum Finish Size in Inches	As-Cast Weight per foot - lb	Bundle Quantity	Gray Iron GX As-Cast Est. lb/Bar
1.500 X 1.500	1.300 x 1.300	7.0	50	43.3
2.250 X 2.250	1.970 x 1.970	15.8	30	97.4
2.500 X 2.500	2.220 x 2.220	19.5	25	123.0

Note: All bars are 72" length

As always, the Dura-Bar Technical Staff is available to aid you in understanding and choosing the best grade for an application. Visit www.dura-bar.com or contact us with any questions.