

# GUIDE TO SELECTION

## ROUND MECHANICAL TUBING – CARBON STEEL

Described below are the five types of carbon steel tubing carried in Ryerson stocks primarily for mechanical applications; ready-to-use tubing with special ID finishes for hydraulic cylinder and fluid line applications; square and rectangular tubing for mechanical and structural applications; and carbon steel pipe.

**COLD DRAWN SEAMLESS** is made from 1026 (UNS G10260) steel in sizes through 9½" OD, from .28 max. carbon steel in sizes over 9½" OD. Produced to OD and ID dimensions, except as noted in size listing. Furnished in "as drawn" condition. Cold drawn seamless offers good surface quality and increased mechanical properties over hot finished seamless tubing. Meets ASTM A519. Stocked in lengths of 17 to 24 feet.

**HOT FINISHED SEAMLESS** is made from 1026 (UNS G10260) steel. It is lower in cost than cold drawn and most applicable where precise dimensions and surface quality are of secondary importance. As an industry standard, HF seamless is manufactured to OD and wall dimensions. Meets ASTM A519/A106 and NACE MR 01-75. Stocked in lengths of 17 to 24 feet.

**DOM (Drawn-over-mandrel)** is a cold drawn electric resistance welded tube with all flash removed. Each tube is tested for soundness of weld. Preferred over seamless tubing for its excellent OD & ID concentricity. Normalizing and cold drawing over a mandrel makes DOM a uniform and precision product. Made from 1020 (UNS G10200) steel in walls 10 ga. and lighter; from 1026 (UNS G10260) or ST 52.3 steel in walls heavier than 10 ga. Furnished in "as drawn" condition. Manufactured to OD and ID dimensions except as noted. Meets ASTM A513 Type 5. Stocked in random lengths of 17 to 24 feet.

**BUTTWELD** is similar to Ry-Star but produced from continuous welded pipe. Does not offer the inherent strength in the weld area of an electric resistance welded product. Made from low carbon SRA steel. Machinability and mechanical properties are reduced as a result of lower carbon content. Meets ASTM A512. Stocked in random lengths 17 to 24 feet.

**ELECTRICAL RESISTANCE WELDED** is produced from low carbon steel. Tubing with walls heavier than 18 ga. is produced from hot rolled steel; tubing with walls 18 ga. and lighter is produced from cold rolled steel. Furnished in "as-welded" condition. OD flash removed on all sizes. For round tubing 1" OD & larger ID flash controlled to .010" to .015" (depending on O.D.) Sizes under 1" OD and all square and rectangles are flash-in. ERW is the lowest cost of all mechanical tubing. Manufactured to OD and wall dimensions. Meets ASTM A513 Type 1 (HR) or Type 2 (CR). Stocked in 20 ft. random lengths.