

HYDRAULIC TUBES

The **HYDRAULIC TUBES** are mainly used in **High Pressure Hydraulic Lines, Fuel Injection Lines, Brake Lines etc.** They are mainly used in **Automotive Industry, Hydraulic Power Pack Manufacturing, Machinery Manufacturers, and Textile Machinery Manufacturers Etc**

These tubes can be manufactured in Straight Lengths in Random Length of 3 Meters to 6 Meters or fixed Length up to 12 Meters.

Our [Seamless Tubes](#) are manufactured by the Cold Drawn Process (Drawn on Mandrel) to provide the closest dimensional tolerance and smooth Outside and Inside Finish. Further to achieve the desired Mechanical properties the tubes are Heat Treated (Normalized , Stress Relieved , Annealed , Tempered Etc) as per the Customer / Grade requirement in **Bright Annealing (Inert Atmosphere) Furnace . Bright Annealed tubes** provide very desirable **Ra Finish Values** for The Inside Diameter Surface of the tubes. Straightening is done on Multiple Roll Straightening Machines to achieve accuracy up 1mm: 1000mm Straightness. Our stringent Quality checks and Best Packing practices (For Exports Special 4 Layer Packing) ensure that the material delivered to the customer is of the highest quality and reaches the destination in best condition.

We manufacture these hydraulic tubes as per various international standards such as :

- EN 10305 â€“ 1 E 215
- EN 10305 â€“ 1 E 235
- EN 10305 â€“ 1 E 355
- DIN 2391 ST 35
- DIN 2391 ST 45
- DIN 2391 ST 30 AL

The tubes supplied to the above grade can be supplied in various final delivery conditions like

DESIGNATION	SYMBOL	DESCRIPTION
COLD DRAWN / HARD	+C	NO FINAL HEAT TREATMENT AFTER THE FINAL COLD DRAWING PROCESS
COLD DRAWN / SOFT	+LC	AFTER THE FINAL HEAT TREATMENT THERE IS A SUITABLE DRAWING PROCESS
COLD DRAWN AND STRESS RELIEVED	+SR	AFTER THE FINAL COLD DRAWING PROCESS THERE IS STRESS RELIEF HEAT TREATMENT
ANNEALED	+A	AFTER THE FINAL COLD DRAWING THE TUBES ARE ANNEALED

NORMALIZED	+N	AFTER THE FINAL COLD DRAWING OPERATION THE TUBES ARE NORMALIZED
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MECHANICAL TUBES

THE MECHANICAL TUBES are available for use like **HYDRAULIC CYLINDER TUBE(READY To HONE TUBES)**, **MECHANICAL SUPPORE TUBES** , **GENERAL ENGINEERING TUBES** and are generally used in industries like **Hydraulic Cylinder Manufacturers , Automotive Component Manufacturers , Shock Absorber Manufacturers, Textile Machinery Manufacturers , Defense etc.** These tubes find application in industries which require high strength along with high accuracy of the Inside/Outside Diameter of the tube. The surface finish also plays a very critical role in the application.

Theses tubes can be manufactured in Straight Lengths of Random Length cut or in Fixed Length.

Our [Seamless Tubes](#) are manufactured by the Cold Drawn Process (Drawn on Mandrel) to provide the closest dimensional tolerance and smooth Outside and Inside Finish. Further to achieve the desired Mechanical Properties the tubes are Heat Treated (Normalized , Stress Relieved , Annealed , Tempered Etc) as per the Customer / Grade requirement. , In order to ensure that the strict Inside/ Outside diameter requirement of the industry are met; we manufacture these tubes only on **Tungsten Carbide Dies and Tungsten Carbide Mandrels**. Straightness is maintained as per the code requirements on a Multiple Roll Straightening Machine to achieve accuracy up 1mm: 1000mm Straightness. Our stringent Quality checks and Best Packing practices (For Exports Special 4 Layer Packing) ensure that the material delivered to the customer is of the highest quality and reaches the destination in best condition.

The tubes are supplied with such finish and accuracy that they can be directly taken up for the honing operation.

We manufacture these mechanical tubes as per various international standards such as :

- EN 10305 -1 E 215
- EN 10305-1 E 235
- EN 10305- 1 E 355
- DIN 2391 ST 35
- DIN 2391 ST45
- DIN 2391 ST 52

The tubes supplied to the above grade can be supplied in various final delivery conditions like

DESIGNATION	SYMBOL	DESCRIPTION
COLD DRAWN / HARD	+C	NO FINAL HEAT TREATMENT AFTER THE FINAL COLD DRAWING PROCESS
COLD DRAWN / SOFT	+LC	AFTER THE FINAL HEAT TREATMENT THERE IS A SUITABLE DRAWING PROCESS

COLD DRAWN AND STRESS RELIEVED	+SR	AFTER THE FINAL COLD DRAWING PROCESS THERE IS STRESS RELIEF HEAT TREATMENT
ANNEALED	+A	AFTER THE FINAL COLD DRAWING THE TUBES ARE ANNEALED
NORMALIZED	+N	AFTER THE FINAL COLD DRAWING OPERTAION THE TUBES ARE NORMALIZED

We can manufacture straight lengths up to 15.00 Meters with maximum outside diameter of 150mm and maximum thickness upto 12.7mm.

