



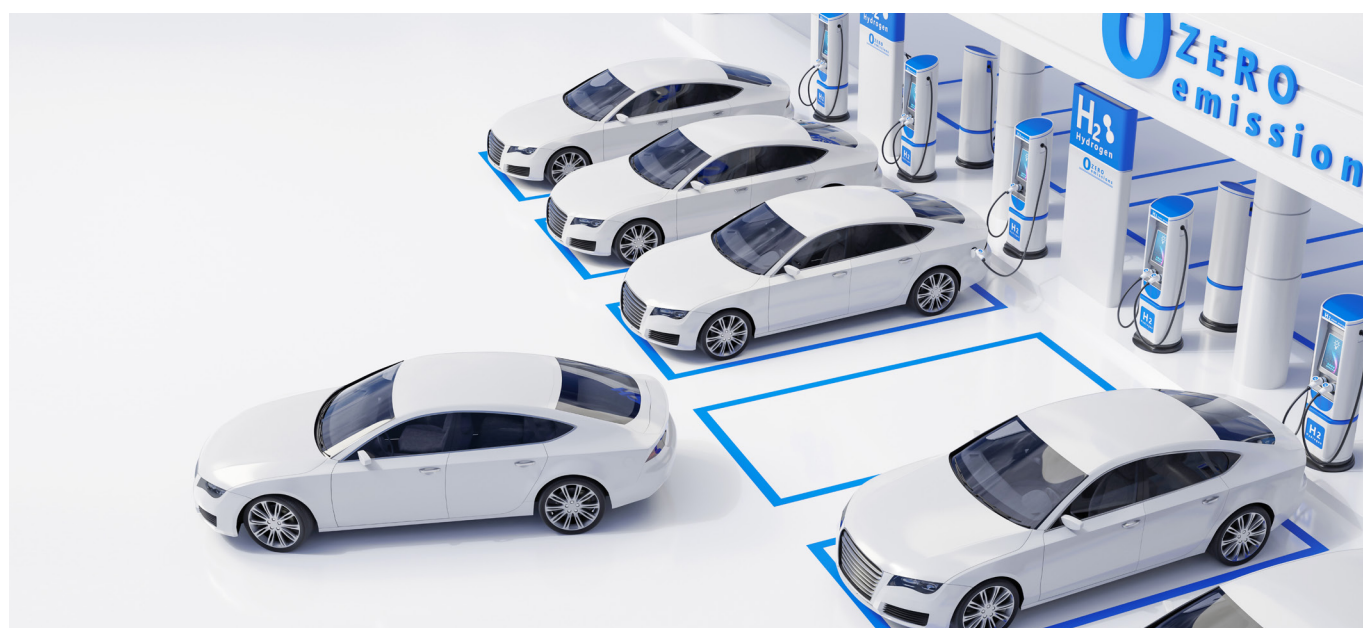
# TK-FUJIKIN

## Hydrogen Compatible Products

for the Alternative Fuel Industry

### | Medium Pressure Tubing for Hydrogen Station

(Working pressures up to 20,000 psi)



Hydrogen electric vehicles are that generate electricity using hydrogen and oxygen through electrochemical reactions and drive motors, and are eco-friendly cars that emit only water without any air pollutants and greenhouse gas emissions.

Hydrogen charging station is a place where hydrogen, the fuel for hydrogen electric vehicles, can be said to be a facility that supplies hydrogen to hydrogen electric vehicles and hydrogen buses in a structure very similar to internal combustion engine LPG and CNG charging stations.

Medium pressure tubing is used for hydrogen electric vehicles and hydrogen charging stations.

The working pressure of tube is up to 20,000 psi.



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## Features

- Medium Pressure Tubing (working pressures up to 20,000 psi)
- TP 316/316L(Nikel component Min 12%) stainless steel seamless tubing
- ASTM A213/A269(Chemical composition only)
- Cold-drawn Finished(1/8 hard)



## Chemical Composition

Specification(ASM / EN)							
Element	Nickel	Chromium	Molybdenum	Carbon	Manganese	Sulfur	Silicon
composition (wt. %)	12-15	16.5-18	2.0-3.0	max 0.035	max 2.00	max 0.030	max 0.75

## Size (Cone and Thread Products)

Pressure Rating	Size	O.D(mm)			I.D(mm)		W.T(mm)		
		Nominal size	min	max	Min	max	nominal size	max	Average
20,000psi	1/4"	6.35	6.17	6.3	2.64	2.77	1.78	1.83	1.77
	3/8"	9.53	9.27	9.4	5.03	5.16	2.18	2.18	2.12
	9/16"	14.29	14.02	14.15	7.8	7.92	3.18	3.18	3.11
	3/4"	19.05	18.8	18.92	10.97	11.13	3.96	3.98	3.91
	1"	25.4	25.15	25.27	14.15	14.27	5.56	5.56	5.5

## Technical Data

Surface	Inner Surface Finish(max)	Making Method	Mechanical(min)			Hardness (min)
			TS(ksi)	YS(ksi)	E(%)	
Bright annealing	Ra 3.2µm(126µ")	1/8 hard	112	75	18	HV 240

## Burst Test Data

### Result

Size	1/8 Hard	
	4,500 bar(65,267 psi) 60sec holding time	6,000 bar( 87,022 psi) 1sec holding time
6.35 x 1.65(for Automotive)	No burst	6,046 bar No burst
9.53 x 2.18(for Station)	No burst	5,758 bar No burst

