kg Steel hollow section extruded

Steel is a ferrous metal and is an alloy of iron and carbon, as well as potential other elements. It has a very high tensile strength. Steel has been used in the construction industry for over a century.

The core material for making steel is iron, which is found in iron ore. Iron is extracted from iron ore in blast furnaces through the smelting process, while controlling for the content of carbon. The molten steel is usually further processed before being extruded into hollow sections.

Hollow sections of steel are commonly used in the construction industry, mainly for structural purposes.

Category *Metals*

Type *Steel*

Functional unit *kg*

Specific heat *490 J/(kg·K)*

Density *7 850 kg/m³*

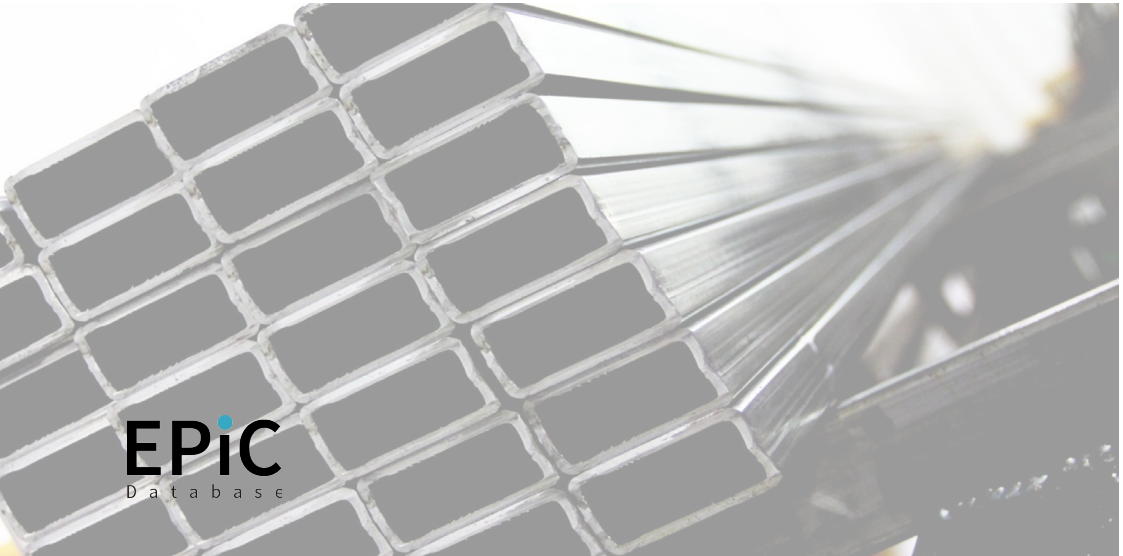
Common uses
Structural profiles

Process name
Steel, extruded (custom)

Input-output sector
Iron and Steel Manufacturing

Further information
doi.org/10.26188/5da558259be14

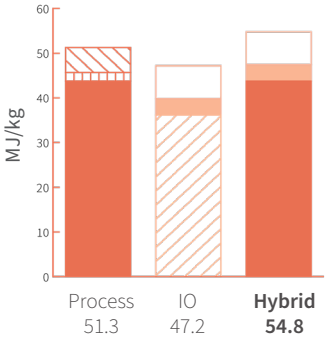
Material variations	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions ($kgCO_2e$/unit)
Steel hollow section extruded	*kg*	*54.8*	*45.2*	*4.6*
Square tube - 20 mm, 1.6 mm thick	m	55	45.4	4.6
Square tube - 50 mm, 2 mm thick	m	172	142	14.5
Square tube - 100 mm, 4 mm thick	m	688	568	57.8



EPiC Database

TOP THREE INPUTS

- 37.8% Steel, converter, low-alloyed, at plant/RER U/ AusSD U
- 2.2% Road Transport
- 1.0% Non Ferrous Metal Ore Mining

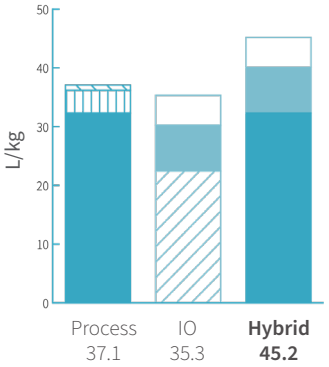


ENERGY

54.8 MJ/kg

TOP THREE INPUTS

- 36.5% Steel, converter, low-alloyed, at plant/RER U/ AusSD U
- 3.2% Non Ferrous Metal Ore Mining
- 1.8% Coal mining

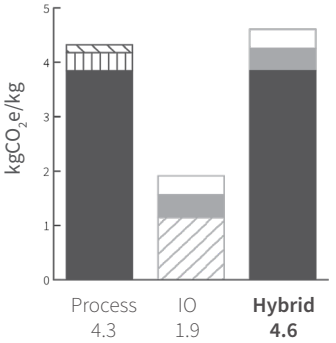


WATER

45.2 L/kg

TOP THREE INPUTS

- 39.1% Steel, converter, low-alloyed, at plant/RER U/ AusSD U
- 2.2% Coal mining
- 1.3% Non Ferrous Metal Ore Mining



GREENHOUSE GAS EMISSIONS

4.6 $kgCO_2e$/kg