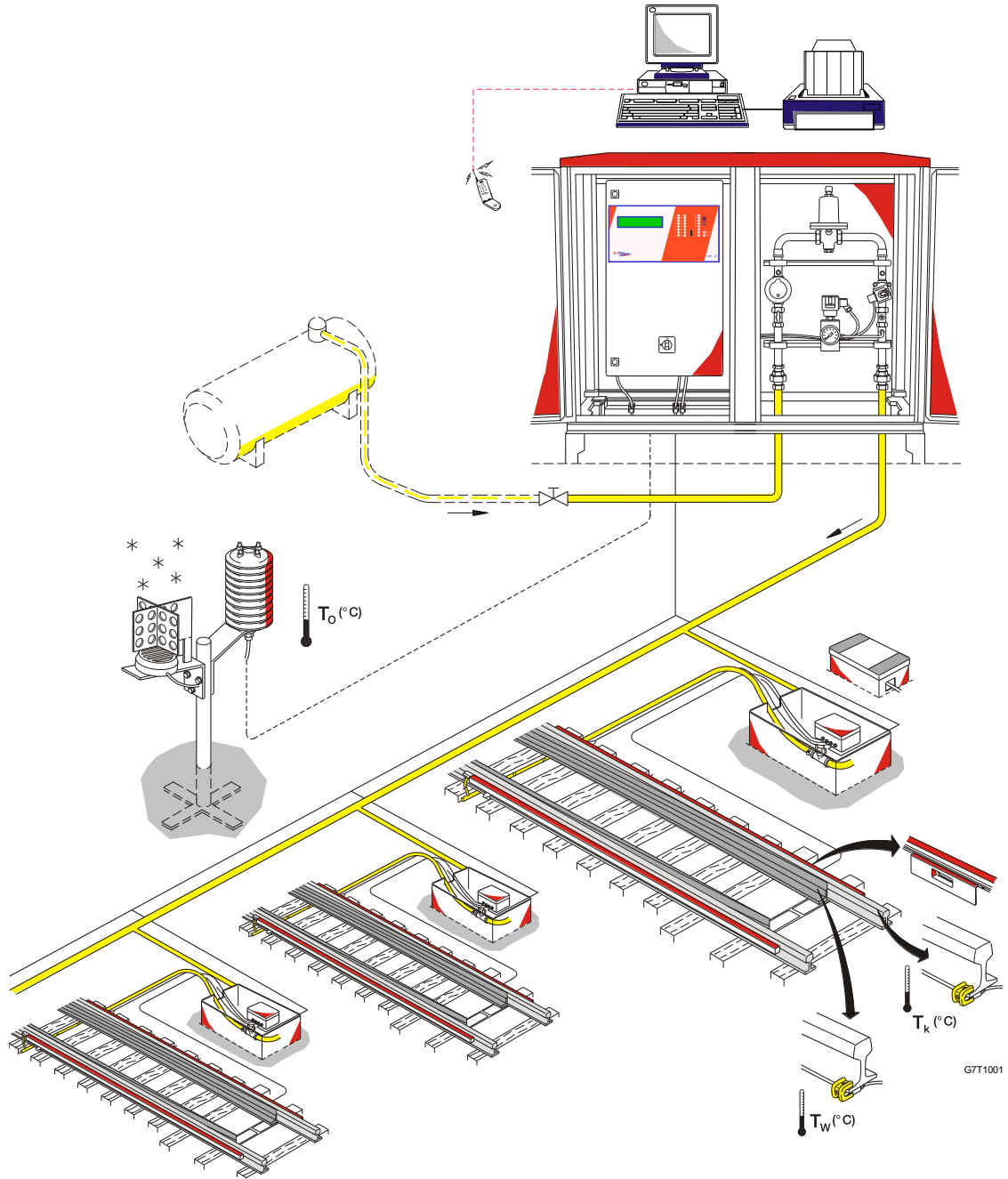


POINT HEATING

Gas infrared heating with burner bars



HIGH CAPACITY, FAST HEATING OF STOCK RAIL

Infrared Gas Point heating (with burner bars) is used in several countries, mainly on locations with a lot of snowfall. It is used on locations with an existing gas infrastructure or on locations without (or insufficient) electrical power.

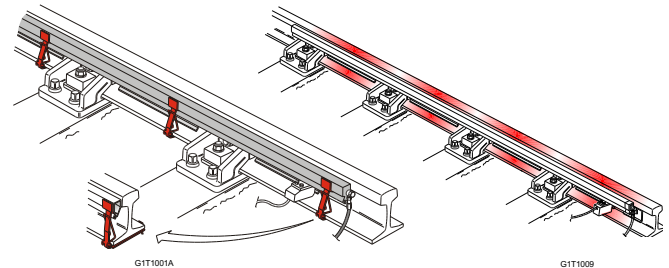
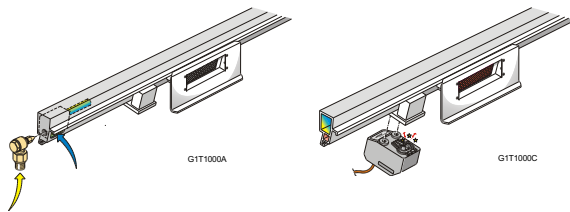


FUNCTION BURNER BAR:

A burner bar exists of a longly shaped profile of aluminium on which a number of infrared burners are assembled. Two channels are installed in the profile. In the main channel a mixture of gas and air is formed by mixing gas with air by means of a nozzle and injector. The greater part of this mixture flows to the infrared burners.

CHARACTERISTICS:

The shape of the burner bar profile is chosen in such a way that the top of the burner bar is situated close to the head of the stock rail. Each burner is provided with a 20cm wide radiation plate. This results in an *efficiency improvement* and a very equable heating of the stock rail between two relative burners. The burner gases are guided along the rail (the heat can not escape).



A smaller part of this mixture flows through very small openings to the second so-called 'ignition'-channel. In this channel the gas-air mixture is ignited by a spark igniter. The ignition flame ignites the gas in the burners. The burning of gas takes place in the burner. This results in an infrared radiation aimed at the heart of the rail.

TECHNICAL SPECIFICATIONS:

Number of burners per burner bar	: 3 tot 11
Max. length of a burner bar	: 7,0 m
Wattage per burner	: approx. 600-700W
Type of gas and pressure	: natural gas 0,15 bar : propane 1,0 bar
Gas consumption per burner (nat.gas):	approx. 0,064Nm ³ /h
Gas consumption per burner propane:	approx. 49 gr/h
Air intake	: atmosphere
Burner bar type HPS-S for i.e.	: 54E1 / 60E1
Burner bar type HPS-B for i.e.	: 46E3 / 49E1
Max. temperature burner gases	: approx. 305°C
Max. rail temperature	: 150°C
Composition burner gases - C02	: 10,5%
- C0	: 750 ppm
- GI Index	: approx. 0,5
- N0x	: nil

