

## **Fitting and Operating Instructions for Furnace Window Type O2004**

### **Description**

The furnace window is a complete fitting which is bolted to the furnace by means of a prepared flange ND16, NW80, DIN2527. The fitting includes a *Casing for Purging Air* which, using a small volume of air or gas, produces a homogeneous flow of air into the furnace, holding back any hot or otherwise unwanted furnace gases. Behind this casing, there is the *Dust Chamber* which serves to suppress any interchange of gases and, thereby, prevents dirt and heat being conveyed to the *Glass Window*. The window can be quickly taken out for cleaning or be replaced.

### **Applications**

The furnace window was developed, mainly for industrial furnaces. It is fitted if ordinary windows become soiled quickly or if the windows, as a result of large differences in temperature, become opaque or crack. It is particularly important to fit this type of window, if there is excess pressure in the furnace so that, with windows open, hot gases may escape and either damage the light barriers or make it necessary to fit the light barriers at a large distance from the furnace.

Ambient air, introduced by a small blower, is suitable as purging air; this is particularly economical, if several furnace windows are fitted. Pressure-reduced compressed air may be used, too. In conditions of reducing atmosphere, air may cause the flames to be rekindled; in that case, it is recommended to use inert or fuel gas for purging. Waste gas from the furnaces may be used as well.

### **Preparatory Work**

Slide a section of 80 to 82mm diameter steel piping through the two prepared windows of the furnace; over the pipe, push two 90 to 150mm long sections of boiler tubing 88.9x3.2mm DIN2448 which have flanges ND16, NW80, DIN2527; the flanges have to be welded to the side of the furnace. Thereafter, the pipe may be removed. The bolt holes of the flanges must be located as shown in the drawing.

### **Fitting**

Bolt the furnace window down, using the seal supplied (8 bolts M16x65, DIN931, with washers, spring washers and nuts). Next fit two connections for purging air to each flange.

### **Adjusting the Air Nozzle**

The air nozzle is pre adjusted. Find the connecting datas in specification.

### **Maintenance**

All that is necessary is to see to it that the whole window is completely tight. If a window is soiled, a clean one is put into its place. A section of sheet metal is to be kept at hand – in order to shield the light barrier from the hot furnace gases which may damage it when the window is opened.

Make sure that you do not use dirty atmosphere/gases for air supply.