

# Gaskets

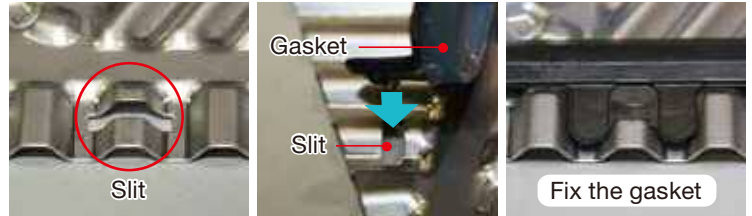
Gaskets used in plate heat exchangers must have durability in various liquid qualities and temperature / pressure conditions. Hisaka has prepared the following gasket materials in order to support a wide variety of applications.

Standard material: NBR, EPDM (ethylene propylene rubber), IIR (butyl rubber)  
 Special material: FPM (fluororubber), silicon, PTFE cushion gasket

## 1. Slit-in Gasket (Glue-free type)

These plate gaskets do not need glue. The slit-in gasket is especially recommended for those applications where frequent replacement of the gasket is required. Further, without the glue, glue odor is reduced. The slit-in type gasket is suitable for applications such as water treatment or food processing. (D-plate gaskets and distance piece gaskets use glue. Also, some plates do not support slit-in gaskets.)

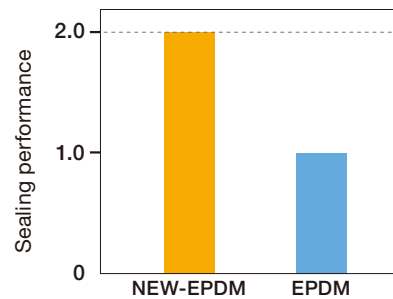
Installation of Slit-in Gaskets



## 2. NEW-EPDM (N-EPDM)

Usually, EPDM gasket is selected either for high temperature or aggressive fluid applications. Although EPDM gaskets are high quality, rubber gaskets lose elasticity as time passes. A cutting edge N-EPDM gasket, newly developed by Hisaka, was introduced. The N-EPDM gasket improves both the heat and chemical resistance. The life-time is two times higher than conventional EPDM. Originally invented specifically for the CO2 chemical recovery process, the N-EPDM is useful for other applications with many advantages.

Life time of NEW-EPDM and EPDM (180°C)



The above compares the sealing performance of the conventional EPDM and the NEW-EPDM. The NEW-EPDM can realize a better heat resistance compared to the conventional EPDM and achieves long time operation.

## 3. PTFE Cushion Gaskets (TCG)

Through our own development, HISAKA has pioneered PTFE Cushion Gaskets for the Plate Heat Exchanger. It is normally used in applications where conventional synthetic rubber would have limitations due to the corrosiveness of the fluid being handled. With this new development, the Plate Heat Exchangers can be applied in a wider variety of applications than before due to the chemical resistance and the durability of PTFE. Due to the elastic core of the TCG gasket, it does not require strong tightening torque during the assembly of the unit. Thus, it reduces the risks of plate deformation by over tightening. A TCG gasket can be used for one side only, if the noncorrosive fluid is running in the other side where a conventional gasket can be used.

Structure of Fluororesin Cushion Gaskets

