

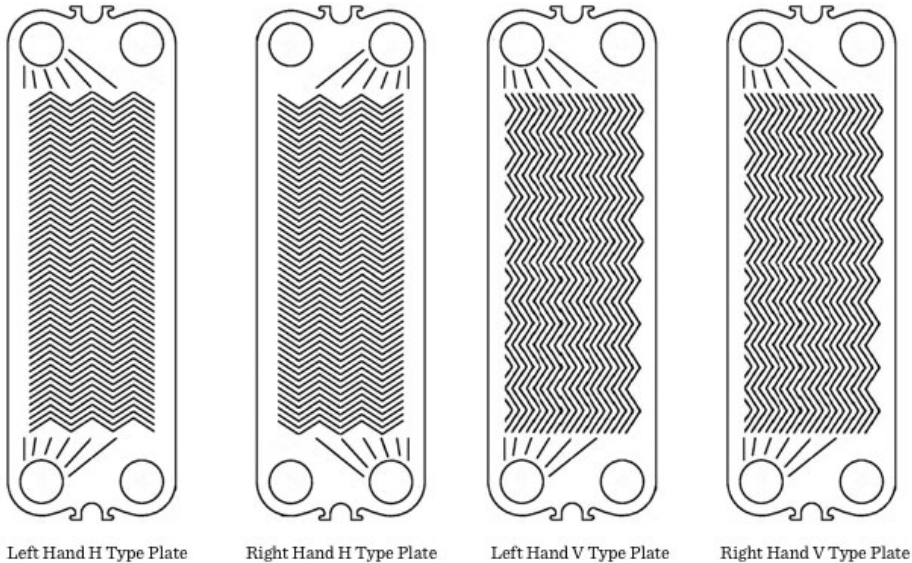
MUELLER

**MIXED GASKET EXPLANATION AND
PLACEMENT PROCEDURE**

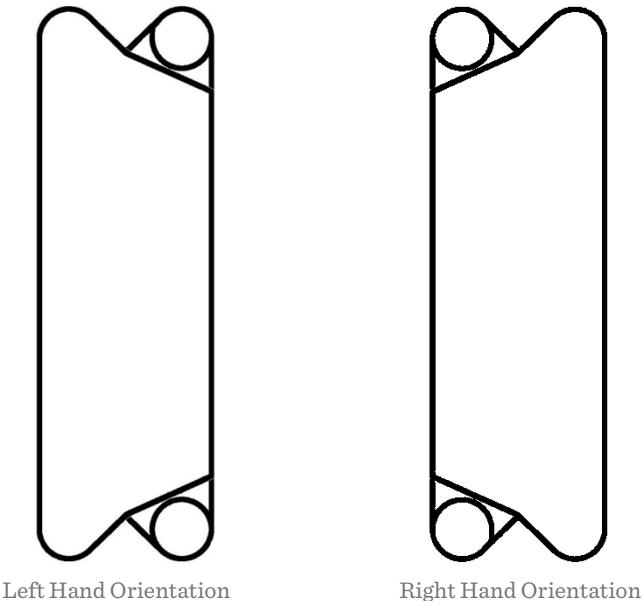
1600 West Phelps Street | Springfield, Missouri 65802, U.S.A.
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PLATE DESIGN

When mixing gaskets, you must first understand the design of the plates themselves. There are two different corrugations in the plate pattern. These patterns are called H and V or F and G. Additionally, a plate can be rotated 180° to create a right and left hand plate. Here are the examples of the four possibilities of H and V plates:



Notice that the “hand” is referenced to the port which allows the fluid to flow on the plate surface. The first gasket is left hand H because the fluid flows from the left ports. Again, gaskets are symmetrical, therefore, they can be flipped 180° to determine their orientation. The right hand H plate is simply the left hand H plate rotated.



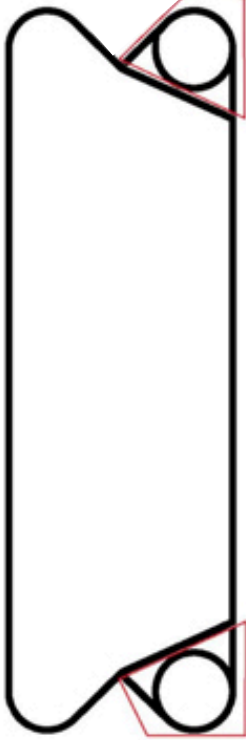
GASKET SECTIONS



Periphery



Bridge



Port

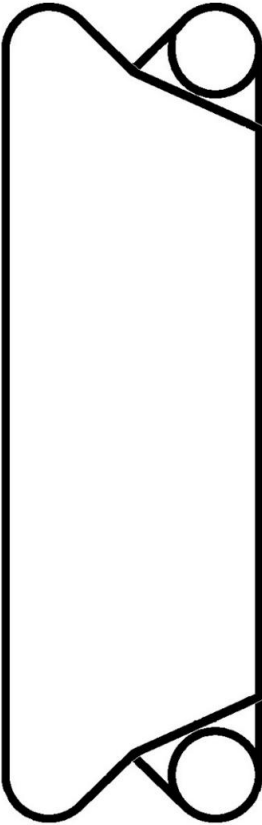
Gaskets have three sections: the periphery, bridge, and port. The port and bridge ensure that the flows are directed correctly through the unit. Additionally, the gap between the port and bridge is a section which allows exterior leakage prior to cross-contamination should a gasket fail in any of the two sections.

There are some instances in which the fluids are not compatible with the same gasket material, and in those cases, we can offer a mixed gasket solution. This can easily be achieved because of the three sections in the gasket.

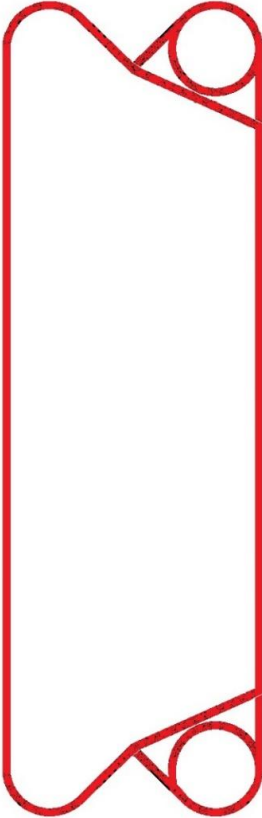
MIXED GASKET SOLUTION

Based on the nature of the flow design of a plate and frame heat exchanger, we know that the fluid, as it travels through the length of a plate, will only contact the periphery of material “A” in one plate and part of the same material “A” on the next. To achieve this sequence, we must cut the ports away from the periphery. Once cut, the gaskets can be mixed in order to provide each of the fluids with a compatible material. Depending on the model, gaskets can be either Loc-in or glued.

STEP 1: Select two gaskets to be mixed and remove them from the plates. These two gaskets will be different materials that are compatible with different fluids. Keep in mind that left and right hand gaskets are the same gasket, except one has been rotated 180°.

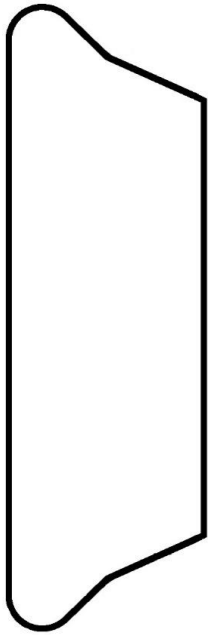


Gasket Material Type “A”



Gasket Material Type “B”

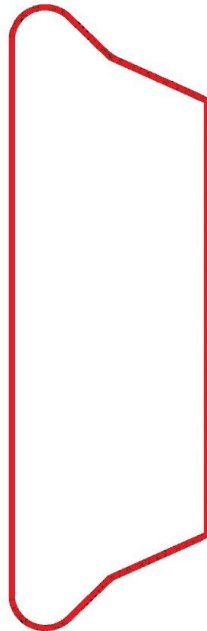
STEP 2: Cut ports away from the periphery.



Periphery Material "A"



Port Material "A"



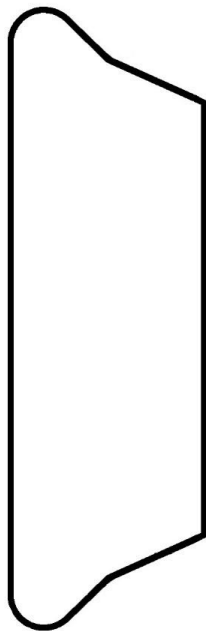
Periphery Material "B"



Port Material "B"

STEP 3: *Mix* the gasket sections.

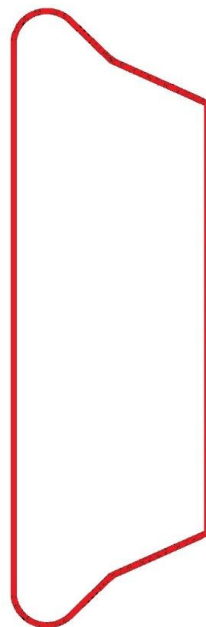
This provides each of the fluids with a compatible material.



Periphery Material "A"



Port Material "B"



Periphery Material "B"



Port Material "A"

STEP 4: Re-attach gaskets onto the plates.

Depending on the model, gaskets can be either Loc-in or glued.



Left hand plate, periphery, material "A"
Left hand plate, port, material "B"



Right hand plate, periphery, material "B"
Right hand plate, port, material "A"

REMINDER: It is extremely important to know the flow pattern of the unit. As a standard, the hot fluid travels through ports 1 and 4—the left hand side of the PHE—while the cold fluid travels through the right hand side. In other words, assuming a standard configuration, on a left hand plate, the periphery material must be compatible with hot fluid, while on the right hand plate, the ports must be of the same material as the periphery of the left hand plate.