

LAMONS METAL & JACKETED GASKET PRODUCT FAMILY

Lamons jacketed gaskets are normally supplied with a non-asbestos, high temperature filler. The standard filler is normally sufficient for applications up to 900°F (482°C). Other soft fillers are available for higher temperatures or special applications. Standard metals used to make jacketed gaskets, regardless of the type, are aluminum, copper, the various brasses, soft steel, nickel, Monel®, Inconel®, and stainless steel types 304, 316, 321, 347, 410. The choice of metal used for the jacketed part of gasket would depend upon the service conditions being encountered.



STYLE 300 DOUBLE JACKETED GASKET

Double jacketed gaskets are most commonly used in heat exchanger applications. They are available in virtually any material that is commercially found in 26 gauge sheet. They are also used in standard flanges where the service is not critical and at temperatures beyond which a soft gasket can be used. Since most double jacketed gaskets are custom made, there is virtually no limit to the size, shape or configuration in which these gaskets can be made. This particular type of gasket can be used in a myriad of applications. Since the size and shape are not a problem and since most materials can be obtained commercially, this particular gasket style is popular. It must be remembered that the primary seal against leakage, using a double jacketed gasket, is the metal inner lap where the gasket is thickest before being compressed and densest when compressed. This particular section flows, affecting the seal. As a consequence, the entire inner lap must be under compression. Frequently, the outer lap is not under compression and does not aid in the sealing of the gasket. On most heat exchanger applications the outer lap is also under compression, providing a secondary seal. The intermediate part of a double-jacketed gasket does very little to effect the sealing capability of the gasket. In some cases, nubbins are provided on heat exchanger designs to provide an intermediate seal. This nubbin is normally 1/64" (0.4 mm) high by 1/8" (3 mm) wide. Experience has indicated, however, that there is little advantage to this particular design. The primary seal is still dependent on the inner lap of the gasket doing the brute work and the secondary seal, when applicable, would be provided by the outer lap.



STYLE 310 PLAIN FLAT METAL GASKETS

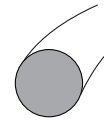
Flat metal gaskets are best suited for applications such as valve bonnets, ammonia fittings, heat exchangers, hydraulic presses, tongue-and-groove joints. They can be used when compressibility is not required to compensate for flange surface finish, warpage or misalignment, and where sufficient clamping force is available to seat the particular metal selected. They must be sealed by the flow of the gasket metal into the imperfections on the gasket seating surfaces of the flange. This typically requires heavy compressive forces. The hardness of gasket metal must be less than the hardness of the flanges to prevent damage to the gasket seating surface of the flange. Flat metal gaskets are relatively inexpensive to produce and can be made of virtually any material that is available in sheet form. Size limitation is normally restricted to the sheet size. Larger gaskets can be fabricated by welding.



NOTE: Monel® and Inconel® are registered trademarks of Special Metals Corporation.

STYLE 320 ROUND CROSS SECTION, SOLID METAL GASKETS

Round cross section solid metal gaskets are used on specifically designed flanges grooved or otherwise faced to accurately locate the gasket during assembly. These gaskets seal by a line contact which provides an initial high seating stress at low bolt loads. This makes an ideal gasket for low pressures.



The more common materials used for this type of gasket would be aluminum, copper, soft iron or steel, Monel, nickel, and 300 series stainless steels. They are fabricated from wire, formed to size and welded. The weld is then polished to the exact wire diameter.

STYLE 333 DOUBLE JACKETED CORRUGATED GASKET

The double jacketed corrugated gasket is an improvement on a plain jacketed gasket in that the corrugations on the gasket will provide an additional labyrinth seal. It also provides the advantage of reducing the contact area of the gasket, enhancing its compressive characteristics. A double jacketed corrugated gasket still relies on the primary seal on the inner lap.



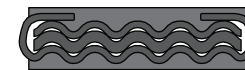
STYLE 340 DOUBLE JACKETED CORRUGATED GASKET WITH A CORRUGATED METAL FILLER

At temperatures in excess of the range of 900°F (483°C) to 1000°F (538°C) where the standard soft filler is normally not recommended, a double jacketed corrugated metal gasket with a corrugated metal filler can be beneficial. This construction has the advantages of the double jacketed corrugated metal gasket and, in addition, since the filler is normally the same material as the gasket itself, the upper temperature limit would be determined by the metal being used. This type of gasket, depending upon metal selected, is designed to be a heat exchanger gasket for high pressure, high temperature applications.



STYLE 341 DOUBLE JACKETED CORRUGATED GASKET WITH CORRUGATED METAL FILLER

Style 341 is the same general configuration as the Style 340, specifically using a 1/32" (0.8 mm) thick corrugated metal filler. In addition, 0.015" (0.4 mm) thick flexible graphite will be applied to both top/bottom



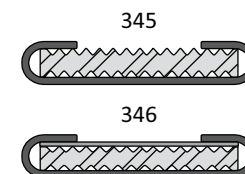
STYLE 344 PROFILE GASKETS

Profile type gaskets offer the desirable qualities of plain washer types and the added advantage of a reduced contact area provided by the V-shaped surface. It is used when a solid metal gasket is required because of pressure or temperature or because of the highly corrosive effect of the fluid to be contained and also when bolting is not sufficient to seat a flat washer.



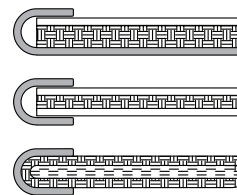
STYLE 345/346 A PROFILE GASKET WITH A METAL JACKET

If flange conditions require a profile type gasket, but flange protection is required as well, the profile gasket may be supplied with either a single jacketed or a double jacketed shield. This will provide protection for the flanges and will minimize damage to the flange faces due to the profile surface.



FRENCH TYPE GASKETS

French type gaskets are available in a one-piece jacketed construction for narrow radial widths not exceeding 1/4" (6.35 mm) and in two and three-piece constructions. This type of gasket can also be used with the jacket on the external edge of the gasket when the application requires the outer edge of the gasket to be exposed to fluid pressure. The most widely used French type gaskets are fabricated using a copper sheath. The double jacketed construction is preferred over the French or single jacketed construction, where practical, since it provides a totally sheathed gasket with none of the soft filler exposed.



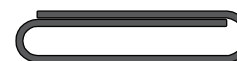
STYLE 350 SINGLE JACKETED GASKET

The majority of applications for single jacketed gaskets are normally 1/4" (6.35 mm) or less in radial width. This type of gasket is used in air tool applications and engine applications where space is limited, gasket seating surfaces are narrow and relatively low compressive forces are available for seating the gasket.



STYLE 382 SINGLE JACKETED OVERLAP

In the single-jacketed overlap construction the maximum flange width is approximately 1/4" (6.4 mm). This type of gasket is used when total enclosure of the soft filler material is required and when the flange width makes it impractical to use a double jacketed gasket.



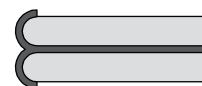
STYLE 375 DOUBLE JACKETED DOUBLE SHELL GASKET

The double-jacketed, double-shelled gasket is similar to the double jacketed gasket except that instead of using a shell and a liner, two shells are used in the fabrication of the gasket. It has the advantage of a double lap at both the ID and the OD of the gasket, adding greater stability to the gasket. The construction will withstand higher compressive loads. Double-shell gaskets are normally restricted to use in high pressure applications.



STYLE 395 MODIFIED FRENCH TYPE

This particular type of gasket is normally used with very light flanges on duct work handling hot gases. Its construction consists of two French type shields welded together with a Cerafelt filler material on either side of the metal. Metal thickness is normally 26 gauge, rolled on the ID to act as a shield.



STYLE 370 CORRUGATED GASKET

The Style 370 includes adhering non-asbestos material strips or fiberglass cord to the corrugated faces – typically in the “valleys”.



NOTE: Without exception all of the solid metal gaskets require a very fine surface finish on the flanges. A flange with a flange surface roughness of 63 AARH or smoother is desired. Under no circumstances should the surface finish exceed 125 AARH. In addition, radial gouges or scores would be almost impossible to seal using solid metal gaskets.