

ASTM F104 Line Callouts

| Style ¹ | ASTM Line Callout | A9: Leakage in | | E99: % Increase in ASTM Fuel B | K: Thermal Conductivity* | M9: Tensile Strength |
|--------------------|------------------------|--------------------------------------|--------------------------------------|--|---|--|
| | | Fuel A (Isooctane) ² | Nitrogen ³ | | | |
| 3000 | F712100A9B4E22K5L101M5 | Typical: 0.2 ml/hr Max: 1.0 ml/hr | Typical: 0.6 ml/hr Max: 1.5 ml/hr | — | K5 | — |
| 3200/3400 | F712900A9B4E45K5L102M9 | Typical: 0.1 ml/hr Max: 1.0 ml/hr | Typical: 0.4 ml/hr Max: 1.0 ml/hr | — | K5 | 2,250 psi min. (15 N/mm ² min.) |
| 3300 | F712400A9B4E34K5L103M6 | Typical: 0.2 ml/hr Max: 1.5 ml/hr | Typical: 1.0 ml/hr Max: 2.0 ml/hr | — | K5 | — |
| 3700 ⁴ | F712900A9B4E99K5L104M9 | Typical: 0.1 ml/hr Max: 1.0 ml/hr | Typical: 0.7 ml/hr Max: 2.0 ml/hr | Weight: 100% max. Thickness: 20-50% | K5 | 2,250psi min (15 N/mm ² min.) |
| 3750 | F712800B4E05L100M9 | — | — | — | — | 3056 psi min. (21 N/mm ² min.) |
| 3760 ⁵ | F719990B6L100M3 | — | — | — | — | — |
| IFG 5500 | F712100A9B4E23K7L501M4 | Typical: 0.2 ml/hr Max: 1.0 ml/hr | Typical: 0.5 ml/h Max: 1.5 ml/hr | — | K7 | — |
| IFG 5507 | F712500A9B2E36K9L504M5 | Typical: 0.1 ml/hr Max: 1.0 ml/hr | Typical: 0.5 ml/ Max: 1.5 ml/hr | — | K9: 0.61 W/m ² K (4.27 btu-in./h-ft ² -°F) | — |
| 9800 | F712400A9B2E34K8L302M9 | Typical: 0.1 ml/hr Max: 0.5 ml/hr | Typical: 0.1 ml/hr Max: 0.5 ml/hr | — | K8 | 1,400 psi min. (9.7 N/mm ² min.) |
| 9850 | F712200A9B2E22K8L301M9 | Typical: 0.1 ml/hr Max: 0.5 ml/hr | Typical: 0.1 ml/hr Max: 0.5 ml/hr | — | K8 | 1,600 psi min. (11 N/mm ² min.) |
| G9900 | F712100A9B2E22K9L401M5 | Typical: 0.1 ml/hr Max: 0.5 ml/hr | Typical: 0.1 ml/hr Max: 0.5 ml/hr | — | K9: 0.87 W/m ² K (6.0 btu-in./h-ft ² -°F) | — |
| ST 706 | F712100A9B3E34K5L501M9 | Typical: 0.5 ml/hr Max: 1.5 ml/hr | — | — | K5 | 1,400 psi min. (9.7 N/mm ² min.) |

| GYLON [®] Style ⁶ | ASTM Line Callout | Fourth Numeral 9: % Increase in IRM Oil #903 | Fifth Numeral 9: % Increase in IRM Oil #903 | Sixth Numeral 9: % Increase in Water | A9: Leakage in Fuel A (Isooctane) ⁷ | E99: % Increase in ASTM Fuel B |
|---------------------------------------|--------------------|--|---|--------------------------------------|--|---|
| 3500 | F451999A9B1E99K6M6 | Thickness: 1.0% max. | Weight: 2.0% max. | Weight: 1.0% max. | Typical: 0.22 ml/hr Max: 1.0 ml/hr | Weight: 2.0% max. Thickness: 1.0% max. |
| 3504 | F456999A9B7E99K3M6 | Thickness: 1.0% max. | Weight: 2.0% max. | Weight: 1.0% max. | Typical: 0.12 ml/hr Max: 1.0 ml/hr | Weight: 2.0% max. Thickness: 1.0% max. |
| 3510 | F451999A9B2E99K5M6 | Thickness: 1.0% max. | Weight: 2.0% max. | Weight: 1.0% max. | Typical: 0.04 ml/hr Max: 1.0 ml/hr | Weight: 2.0% max. Thickness: 1.0% max. |
| 3540 ⁵ | F419000A9B2 | — | — | — | Typical: 0.25 ml/hr Max: 1.0 ml/hr | — |
| 3545 ⁵ | F419000A9B3 | — | — | — | Typical: 0.15 ml/hr Max: 1.0 ml/hr | — |
| HP 3560 ⁸ | F451999A9B1E99K6M6 | Thickness: 1.0% max. | Weight: 2.0% max. | Weight: 1.0% max. | Typical: 0.22 ml/hr Max: 1.0 ml/hr | Weight: 2.0% max. Thickness: 1.0% max. |
| HP 3561 ⁸ | F451999A9B2E99K5M6 | Thickness: 1.0% max. | Weight: 2.0% max. | Weight: 1.0% max. | Typical: 0.04 ml/hr Max: 1.0 ml/hr | Weight: 2.0% max. Thickness: 1.0% max. |
| 3565 | F457999A9B6E99M6 | Thickness: 1.0% max. | Weight: 2.0% max. | Weight: 1.0% max. | Typical: 0.33 ml/hr Max: 1.0 ml/hr | Weight: 2.0% max. Thickness: 1.0% max. |

| Style ¹ | ASTM Line Callout |
|--------------------|-------------------|
| 660 | F328148M4 |
| 681 | F326128M6 |

¹ For these styles, thickness is 1/32".

² Gasket load = 500 psi (3.5 N/mm²); internal pressure = 9.8 psig (0.7 bar).

³ Gasket load = 3,000 psi (20.7 N/mm²); internal pressure = 30 psig (2 bar).

⁴ % Increase in ASTM #3 Oil (fourth numeral 9 is thickness, fifth numeral 9 is weight):
3200/3400- Thickness: 25-50%;

3700- Thickness: 60-100%; and 3760- Thickness: 75%, Weight: 85%.

⁵ Third numeral 9: F36 Compressibility: 3760: 15-30%, 3540: 70-85%, and 3545: 60-70%.

⁶ For Styles 3500 thru 3545, thickness is 1/32"; for Styles 3560-3565, thickness is 1/16".

⁷ Gasket load = 1,000 psi (7.0 N/mm²); internal pressure = 9.8 psig (0.7 bar).

⁸ F868 Line callout = OFMF9: 9 = Perforated stainless steel.

* NOTE:

K1 thru K9 thermal conductivity characteristics shall be determined in accordance with F-104, 9.10. The K-factor obtained in W/m²K (btu-in./h-ft²-°F) shall fall within the ranges indicated by the numeral of the K symbol:

K1 = 0 to 0.09 (0 to 0.65)

K2 = 0.07 to 0.17 (0.50 to 1.15)

K3 = 0.14 to 0.24 (1.00 to 1.65)

K4 = 0.22 to 0.31 (1.50 to 2.15)

K5 = 0.29 to 0.38 (2.00 to 2.65)

K6 = 0.36 to 0.45 (2.50 to 3.15)

K7 = 0.43 to 0.53 (3.00 to 3.65)

K8 = 0.50 to 0.60 (3.50 to 4.15)

K9 = as specified