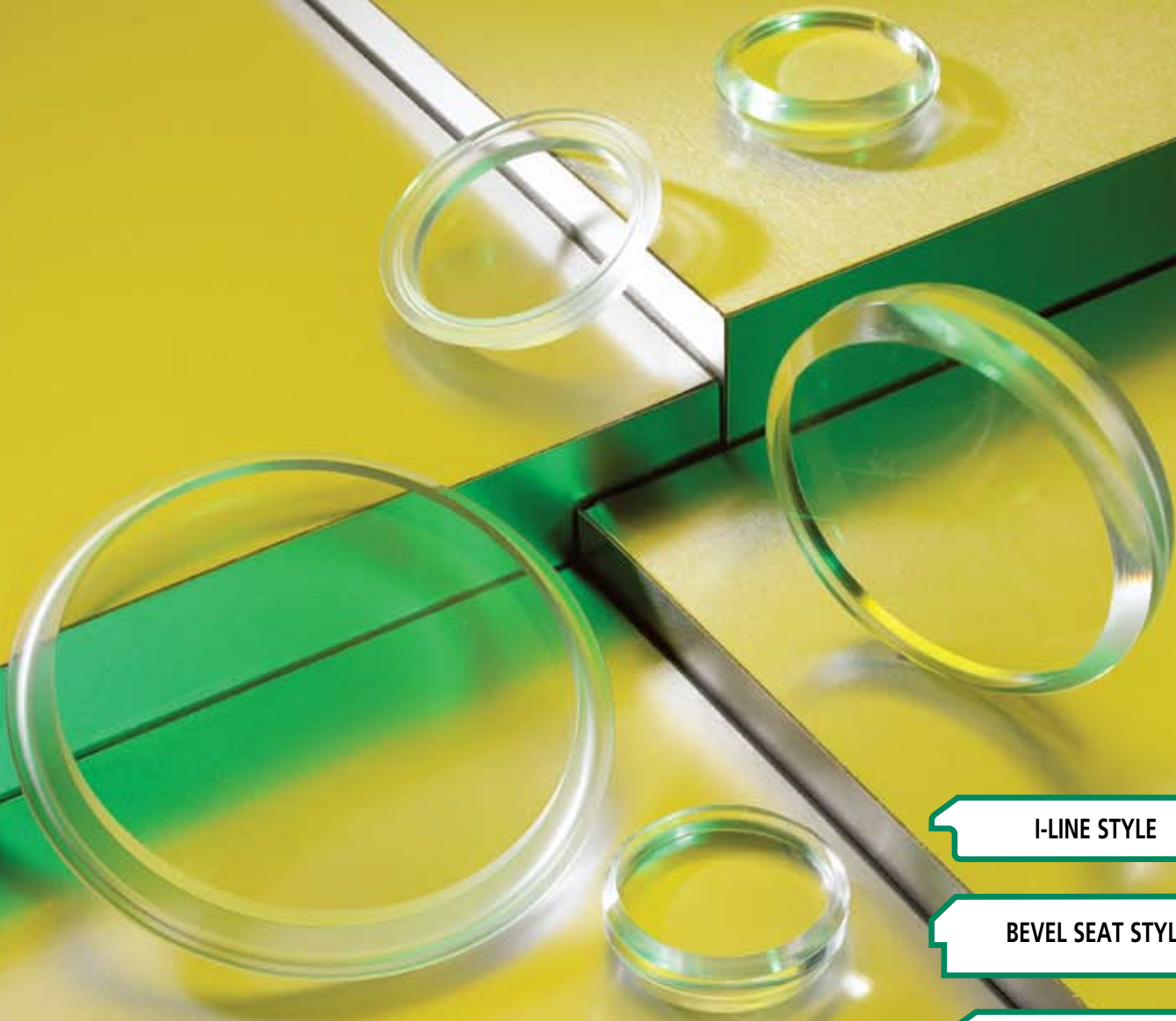


ACRYLIC SIGHT GLASSES



I-LINE STYLE

BEVEL SEAT STYLE

Q-LINE STYLE

TRI-CLAMP STYLE



NEWMANTM
SANITARY GASKET COMPANY

PRODUCTS OF INTEGRITY...FROM PEOPLE OF INTEGRITY

Pressure Rating (PSIG) Constant Load Case

| | | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG |
|----------------|------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|
| SIZE | | 1 1/2" | | | | 2" | | | | 2 1/2" | | | | 3" | | | | 4" | | | |
| TEMPERATURE °F | 77° | 150 | 150 | 59 | 150 | 94 | 135 | 85 | 85 | 64 | 133 | 54 | 103 | 47 | 96 | 40 | 75 | 27 | 66 | 25 | 48 |
| | 92° | 131 | 150 | 51 | 130 | 82 | 117 | 74 | 74 | 56 | 115 | 47 | 89 | 40 | 83 | 34 | 65 | 24 | 58 | 22 | 41 |
| | 104° | 121 | 150 | 47 | 120 | 75 | 108 | 68 | 68 | 51 | 106 | 44 | 82 | 37 | 77 | 32 | 60 | 22 | 53 | 20 | 38 |
| | 122° | 111 | 150 | 43 | 110 | 69 | 99 | 63 | 63 | 47 | 97 | 40 | 76 | 34 | 70 | 29 | 55 | 20 | 49 | 18 | 35 |
| | 140° | 101 | 147 | 39 | 100 | 63 | 90 | 57 | 57 | 43 | 89 | 36 | 69 | 31 | 64 | 27 | 50 | 18 | 44 | 17 | 32 |
| | 158° | 81 | 118 | 32 | 80 | 50 | 72 | 46 | 46 | 34 | 71 | 29 | 55 | 25 | 51 | 21 | 40 | 15 | 35 | 13 | 25 |
| | 176° | 61 | 88 | 24 | 60 | 38 | 54 | 34 | 34 | 26 | 53 | 22 | 41 | 19 | 38 | 16 | 30 | 11 | 27 | 10 | 19 |
| | 194° | 30 | 44 | 12 | 30 | 19 | 27 | 17 | 17 | 13 | 27 | 11 | 21 | 9 | 19 | 8 | 15 | 5 | 13 | 5 | 10 |

Pressure Rating (PSIG) Intermittent Load Case

| | | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG | Tri-Clamp 16AMPSG | Bevel Seat 16ASG | Q-Line 16AQSG | I-Line 16AI-14ISG |
|----------------|------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|-------------------|------------------|---------------|-------------------|
| SIZE | | 1 1/2" | | | | 2" | | | | 2 1/2" | | | | 3" | | | | 4" | | | |
| TEMPERATURE °F | 77° | 150 | 150 | 118 | 150 | 150 | 150 | 150 | 150 | 129 | 150 | 109 | 150 | 93 | 150 | 80 | 150 | 54 | 133 | 50 | 95 |
| | 92° | 150 | 150 | 79 | 150 | 126 | 150 | 114 | 114 | 86 | 150 | 73 | 137 | 62 | 128 | 53 | 100 | 36 | 89 | 34 | 63 |
| | 104° | 150 | 150 | 59 | 150 | 94 | 135 | 85 | 85 | 64 | 133 | 54 | 103 | 47 | 96 | 40 | 75 | 27 | 66 | 25 | 48 |
| | 122° | 111 | 150 | 43 | 110 | 69 | 99 | 63 | 63 | 47 | 97 | 40 | 76 | 34 | 70 | 29 | 55 | 20 | 49 | 18 | 35 |
| | 140° | 101 | 147 | 39 | 100 | 63 | 90 | 57 | 57 | 43 | 89 | 36 | 69 | 31 | 64 | 27 | 50 | 18 | 44 | 17 | 32 |
| | 158° | 81 | 118 | 32 | 80 | 50 | 72 | 46 | 46 | 34 | 71 | 29 | 55 | 25 | 51 | 21 | 40 | 15 | 35 | 13 | 25 |
| | 176° | 61 | 88 | 24 | 60 | 38 | 54 | 34 | 34 | 26 | 53 | 22 | 41 | 19 | 38 | 16 | 30 | 11 | 27 | 10 | 19 |
| | 194° | 30 | 44 | 12 | 30 | 19 | 27 | 17 | 17 | 13 | 27 | 11 | 21 | 9 | 19 | 8 | 15 | 5 | 13 | 5 | 10 |

NOTES REGARDING PRESSURE RATINGS ACRYLIC SIGHT GLASSES

The pressure ratings in the above charts were calculated using procedures derived from engineering formulas published in Roark's Formulas for Stress and Strain, 6th edition, McGraw Hill. The charts show pressure ratings in PSIG for four types of acrylic sight glasses.

The Design Stress, the Intermittent Load Stress and the Poisson's Ratio we used as a basis for these calculations are those published by the manufacturer of the acrylic material. The stresses used are the maximum recommended such that "crazing due to stress alone will not occur for a very long time."

Note that the stress values employed are considerably lower than those published for the ultimate tensile strength of this material. Further, we have applied a safety factor of 2 in our calculation of pressure ratings. Finally, we have limited the rating to a maximum of 150 PSIG in those cases where the calculations yielded ratings in excess of that value.

Thus, we feel that our ratings offer a substantial margin of safety relative to the rupture strength of the sight glasses.

Nevertheless, because individual service conditions vary and because we have no control over individual applications and installations, we cannot guarantee the ratings in any particular use. While we hope the following data will serve as a useful guideline to engineers, it is up to the user to determine suitability for a specific application.

In particular, for hazardous service conditions, we strongly recommend that the user further derate the sight glasses. We also recommend that, at a minimum, the user hydrostatically test installations at pressures at least twice the maximum service pressure. For unusual or demanding applications, we recommend and encourage the user to contact the factory.

Newman Sanitary Gasket Company Sight Glasses are made from clear Plexiglas® formulations that have received clearance under FDA food additive regulation 21 CFR 177.1010 for use in contact with all types of food at or below room temperature.



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