



VALVULAS WORCESTER DE MEXICO, S.A. DE C.V.

RHINO VALVES WORLDWIDE



**CERTIFICADO DE CALIDAD/QUALITY CERTIFICATE**

EN 10 204 3.1 B

|  |                                      |   |                                   |
|--|--------------------------------------|---|-----------------------------------|
| <b>Factura / Invoice:</b><br>90706   | <b>Cantidad / Quantity:</b><br>50.00 | <b>Certificado / Certificate:</b><br>EE90706/11 | <b>Fecha / Date:</b><br>19/Dic/02 |
| <b>Descripción / Description:</b><br>411-T 1/2" S.E. NPT                   |                                      |   |                                   |
| <b>Cliente / Customer:</b><br>7 TUBOS CONEXIONES Y TANQUES, S. A. DE C. V. |                                      |   |                                   |

**Numeros de Rastreabilidad / Traceability Number:**

02J14061 A 02J15060, 02K09472 A 02K09721

**ORIGINAL**



Válvulas Worcester de México, S.A. de C.V., certifica que el material indicado cumple con nuestras especificaciones como se describe en nuestros catálogos, hojas de especificación, dibujos y en otra literatura. Los productos, partes, materiales indicados aquí han sido comprados, fabricados, inspeccionados, probados de acuerdo con estas especificaciones, a nuestro sistema de calidad ISO 9001 y ASME/ANSI B16.34-1998 inciso (7).

Válvulas Worcester de México, S.A. de C.V., hereby certifies that the material supplied is in accordance with our specifications as describe in our catalog, specification sheets, drawings, and other literature. The products, parts and materials identified herein have been purchased, manufactured, inspected and tested in accordance with these specifications, our ISO 9001 quality assurance program and ASME/ANSI B16.34-1998 part (7).

Elaboro / Elaborated by

Tec. José Luis Pérez C.  
Tec. Metrologista

**RECIBIMOS  
A REVISION  
★ 06 ENE 2003 ★  
TUBOS, CONEXIONES Y  
TANQUES, S.A. DE C.V.**

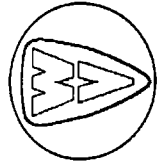
Aprobo / Aproved by:

Ing. Saturnino Padilla Becerra  
Gerente de Aseguramiento de Calidad  
Quality Ass. Manager.

Maíz No. 263, Colonia Valle del Sur, Delegación Iztapalapa, México D.F. C.P. 09819

Teléfonos: 56-70-51-55 (8 líneas) 56-70-66-24 55-82-91-03 5582-30

Fax: 56-70-67-41 56-70-35-13 e-mail: calidadw@worcester.com.mx



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**CERTIFICADO DE CALIDAD / QUALITY CERTIFICATE**

CERTIFICADO / CERTIFICATE: EE90706/11

| No. | COMPONENTES<br>COMPONENTS | MATERIAL<br>MATERIAL |
|-----|---------------------------|----------------------|
| 1   | CUERPO / BODY             | ASTM B124 C37700     |
| 2   | TAPA / PIPE END           | ASTM B124 C37700     |
| 3   | VASTAGO / STEM            | 12L14                |
| 4   | ESFERA / SPHERE           | AISI 316             |

| ANALISIS QUIMICO / CHEMICAL ANALYSIS |       |       |       |       |       |        |       |        |        |    | PROPIEDADES MECANICAS / MECHANICAL PROPERTIES |       |    |        |       |       |                          |                  |                    |                  |              |              |                   |                   |        |          |
|--------------------------------------|-------|-------|-------|-------|-------|--------|-------|--------|--------|----|---|-------|----|--------|-------|-------|--------------------------|------------------|--------------------|------------------|--------------|--------------|-------------------|-------------------|--------|----------|
| No.                                  | C%    | Mn%   | Si%   | P%    | S%    | Cr%    | Mo%   | Ni%    | Cu%    | V% | Fe%   | Al%   | N% | Zn%    | Pb%   | Sn%   | RESISTENCIA A LA TENSION | TENSILE STRENGTH | LIMITE DE CEDENCIA | TENSILE STRENGTH | % ELONGACION | % ELONGACION | REDUCCION DE AREA | REDUCCION DE AREA | DUREZA | HARDNESS |
| 1                                    | X     | 0.002 | 0.004 | X     | X     | 0.004  | X     | X      | 59.230 | X  | 0.243   | 0.013 | X  | 38.630 | 1.840 | 0.004 | X                        | X                | X                  | X                | X            | X            | X                 | X                 | 60 RB  | 60 RB    |
| 2                                    | X     | 0.000 | 0.004 | X     | X     | 0.004  | X     | X      | 58.830 | X  | 0.234   | 0.003 | X  | 38.810 | 1.850 | 0.269 | X                        | X                | X                  | X                | X            | X            | X                 | X                 | 60 RB  | 60 RB    |
| 3                                    | 0.080 | 1.150 | 0.020 | 0.049 | 0.295 | X      | X     | X      | X      | X  | X   | X     | X  | X      | X     | X     | X                        | X                | X                  | X                | X            | X            | X                 | 156 HB            | 156 HB |          |
| 4                                    | 0.020 | 1.380 | 0.460 | 0.022 | 0.021 | 16.210 | 2.370 | 10.250 | X      | X  | X   | X     | X  | X      | X     | X     | 85200 Psi                | 41606 Psi        | 41606 Psi          | 56               | 56           | 74           | 74                | 165 HB            | 165 HB |          |

**ORIGINAL**

| TIPO DE PRUEBA<br>TYPE OF TEST                          | PSI   | RESULTADO<br>RESULT                |
|---|-------|------------------------------------|
| PRUEBA HIDRAULICA DEL CUERPO<br>HYDRAULIC TEST ON BODY  | 900   | SIN FUGA<br>" OK" NO LEAKAGE FOUND |
| PRUEBA HIDRAULICA EN ASIENOS<br>HYDRAULIC TEST ON SEATS | 700   | SIN FUGA<br>" OK" NO LEAKAGE FOUND |
| PRUEBA NEUMATICA EN ASIENOS<br>NEUMATIC TEST ON SEATS   | 50-80 | SIN FUGA<br>" OK" NO LEAKAGE FOUND |

*S.P.A.*