The production of a zero maintenance, high performance metal seated valve has been the goal of many engineers. Starline are unique as their combination metal seat/viton seat offers true class VI shut off. The seamless design has been simulated by TUV Gas for 50 years service. Sand and many other particulates will not damage the unique bonded special formulation viton seat inset. Starline also manufacture a pure metal to metal seat for high temperature and more aggressive abrasive service.

For certain applications such as abrasive media or high temperature, soft seated ball valves are not suitable and the ultimate solution is to use a top quality metal seated valve but at a reasonable price. 100% ITALIAN MADE.

Starline's range of METAL SEATED BALL VALVES provides a high performance, zero maintenance, high quality standard production ball valve with a competitive price and relatively short delivery time. The production of STARLINE METAL SEATED BALL VALVES has been divided in two different categories: HIGH TEMPERATURE and ABRASIVE SERVICE.

Starline has developed its standard production to obtain a contained cost ABRASIVE SERVICE metal seated ball valve, tested by simulating a 50 years life service in an abrasive environment with water containing river sand, welding rods and other abrasive particulates. The HIGH TEMPERATURE floating ball and trunnion mounted bi-directional metal seated valves has been developed by Starline for customers looking for a reliable valve at a competitive price.

Additional information on the full range of Starline floating & trunnion mounted metal seated ball valves, go to www.globalsupplyline.com.au/catalogue-starline.html
4 METAL STAR
FORGED STEEL BALL VALVES

METAL SEATED BALL VALVE

PED 97/23 EC
ATEX 94/9 CE

Certificate N°: RPS 0160304/01
Tech. File N° ST01 ATEX
CONSTRUCTION - MATERIAL

### DESCRIPTION

**CONSTRUCTION:** TWO PIECES BOLTED CONSTRUCTION - ANTI BLOW OUT PROOF STEM DESIGN - SOLID BALL AND METAL SEATS SURFACES ARE COATED WITH TUNGSTEN CARBIDE, CHROME CARBIDE AND STELLITE 6 - ANTISTATIC DEVICE - FIRE SAFE DESIGN - ISO 5211 ON THE TOP FOR EASY AUTOMATION.

**SIZE:**
- DN 8 ÷ 50 FULL BORE — DN 20 ÷ 80 REDUCED BORE
- 1/4” ÷ 2” FULL BORE — 3/4” ÷ 3” REDUCED BORE

**CLASS:**
- PN16 ÷ 100 or ASME 150 ÷ 600 LBS

**TEMPERATURE:**
- -200° C UP TO +700° C

**MATERIAL:**
- ASTM A105 - LF2 - 316 - 316L - F22 - INCONEL AND SPECIAL MATERIALS

**DESIGN:**

**MARKING:**
- MSS SP25
- CE 0038

**NOTICE:**
- MSS SP25

**CERTIFICATE:**
- ACCORDING TO DIRECTIVE 97/23/EC - MODULE H CATEGORY III NOTIFIED BODY LLOYD’S REGISTERED CERTIFICATE NR. RPS 0196034/01
- EX IM2/II 2GD

**TEST CERTIFICATE:**
- UNI EN 10204 TYPE 3.18 UNLESS OTHERWISE REQUIRED

**SERVICES:**
- FOR EXTREME TEMPERATURE, ABRASIVE AND CORROSIVE SERVICE
### Dimensions

**STAR Line**

**B.P: P.E. ANSI B16.25 Sch. 40 - XS - 80 - 160**

Note: other overall lengths are available on request.

**S.W.: ANSI B16.11**

Note: when flanges are RF type of finish must be stated on the order.

#### Full Bore

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ISO 5211</strong></td>
<td>150 RF</td>
<td>300 RF</td>
<td>300 RF</td>
<td>600 RF</td>
<td>PN 10-160</td>
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<tr>
<td>DN 6</td>
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<td>186</td>
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<td>DN 10</td>
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<td>86</td>
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<tr>
<td>DN 15</td>
<td>156</td>
<td>146</td>
<td>136</td>
<td>80</td>
<td>50</td>
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<td>DN 50</td>
<td>206</td>
<td>196</td>
<td>186</td>
<td>130</td>
<td>100</td>
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</table>

#### Reduced Bore

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ISO 5211</strong></td>
<td>150 RF</td>
<td>300 RF</td>
<td>300 RF</td>
<td>600 RF</td>
<td>PN 10-160</td>
</tr>
<tr>
<td>DN 20</td>
<td>220</td>
<td>210</td>
<td>200</td>
<td>130</td>
<td>100</td>
</tr>
<tr>
<td>DN 32</td>
<td>220</td>
<td>210</td>
<td>200</td>
<td>130</td>
<td>100</td>
</tr>
<tr>
<td>DN 40</td>
<td>220</td>
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<td>200</td>
<td>130</td>
<td>100</td>
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<tr>
<td>DN 50</td>
<td>220</td>
<td>210</td>
<td>200</td>
<td>130</td>
<td>100</td>
</tr>
</tbody>
</table>

**Notes:**

- For size DN 40 or 1.1/2" gear operated for class 300 to 600 or PN 40 to 100
- For size DN 50 or 2" gear operated for all pressure ratings

**FLANGES in accordance to ASME / ANSI B 16.5**

**FACE to FACE in accordance to ASME / ANSI B16.10**

**Note:** when flanges are RF type of finish must be stated on the order.
STARLINE WELDED BALL VALVES
FOR GAS STORAGE

One piece seal welded body, floating ball double block. Primary seal METAL, to METAL, secondary seal vulcanized Viton or NBR, pressure safe cover for the stem to prevent any leakage. For operation remove the cover.

Completely in accordance to spec. KN251-005.
Specifically designed as shut off drain and vent lines for larges valve sizes and as Gas Storage valves, these valves have passed a critical prototype testing simulating 50 years service life with raw gas, and sand.

Valve range:
produced in the 3 typical sizes 1/2” - 1” - 2”
different combinations of end connections to suit any requirement

Class ratings:
all sizes are available in ASME class 600 Lbs (ISO PN 100) and ASME class 1500 Lbs (ISO PN250)
### TECHNICAL DATA

#### DESCRIPTION
- **CONSTRUCTION**: Three pieces bolted construction - solid ball - Anti blow out proof stem design
- **MATERIAL**: ASTM A105 - 316 - 316L
- **FOR GENERAL SERVICES AND CHEMICAL INDUSTRIES**: According to ATEX 94/9 CE - Technical File Nr. ST01 ATEX
- **ACCORDING TO DIRECTIVE 97/23/CE**: Module H Category III - Notified Body Lloyd’s Register
- **-100°C UP TO + 260°C**
- **MSS SP25**

#### PRESSURE/Temperature LIMITATIONS OF SEAT SEAL

#### FLOW DATA

The following flow rates were determined for ball valves in fully open position and a water temperature of 60°F (15°C).

#### MAIN DISTRIBUTORS

Norway, Sweden, Denmark, Netherlands, Belgium, Switzerland, Austria, Greece, Brasil, USA, Canada, Australia, New Zealand, South Africa, UAE, Czech Republic, Slovakia, Poland, Singapore, Romania, Oman, Saudi Arabia, Kuwait

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**FLOW DATA**

The following flow rates were determined for ball valves in fully open position and a water temperature of 60°F (15°C).

#### PRESSURE/Temperature LIMITATIONS OF SEAT SEAL

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TEMPERATURE</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-10°C to +25°C</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>2</td>
<td>-10°C to +25°C</td>
<td>Carbon Steel</td>
</tr>
</tbody>
</table>

#### MAXIMUM WORKING PRESSURE (WOG/CWP)

<table>
<thead>
<tr>
<th>SIZE</th>
<th>K long bore (inches)</th>
<th>K short bore (inches)</th>
<th>Kv (m³/h)</th>
<th>Cv (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>6,8</td>
<td>8</td>
<td>155</td>
<td>155</td>
</tr>
<tr>
<td>3/8</td>
<td>10</td>
<td>12</td>
<td>162</td>
<td>162</td>
</tr>
<tr>
<td>1/2</td>
<td>26</td>
<td>30</td>
<td>178</td>
<td>178</td>
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<tr>
<td>3/4</td>
<td>38</td>
<td>45</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>1</td>
<td>70</td>
<td>78</td>
<td>225</td>
<td>225</td>
</tr>
<tr>
<td>1.1/4</td>
<td>99</td>
<td>103</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

#### SEAT MATERIALS

- **(B)** = PTFE + 60% Bronze
- **(S)** = PTFE + 20% C. 5% Graphite
- **(R)** = PTFE + 15% Fiberglass
- **(T)** = PTFE Virgin

#### SEAT CLASS RATING

<table>
<thead>
<tr>
<th>SIZE</th>
<th>SEAT MATERIAL</th>
<th>CLASS</th>
<th>MAXIMUM WORKING PRESSURE (WOG/CWP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>PTFE</td>
<td>1</td>
<td>150/150 (Bar/Psi)</td>
</tr>
<tr>
<td>3/8</td>
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<td>200/200 (Bar/Psi)</td>
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<td>3/4</td>
<td>PTFE</td>
<td>4</td>
<td>300/300 (Bar/Psi)</td>
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<tr>
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<td>PTFE</td>
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<td>350/350 (Bar/Psi)</td>
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<tr>
<td>1.1/4</td>
<td>PTFE</td>
<td>6</td>
<td>400/400 (Bar/Psi)</td>
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<tr>
<td>1.1/2</td>
<td>PTFE</td>
<td>7</td>
<td>450/450 (Bar/Psi)</td>
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<tr>
<td>2</td>
<td>PTFE</td>
<td>8</td>
<td>500/500 (Bar/Psi)</td>
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</tbody>
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**Certificate N°: RPS 01003401**

**APPROVAL CERTIFICATE No. LRC 160047**

**Ex IM2/II 2GD**

**CE 0038**

**MARKING**

- **Design**
- **Material**
- **Temperature**
- **Class**
- **Construction**
- **Description**

**FLOW DATA**

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<tr>
<th>KV 6,8 long bore (inches)</th>
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